

textile

bulletin

Retailers, who undoubtedly can use a better understanding of the textile market, have been given just that by Pepperell's Donald B. Tansill. See Page 25 this issue.

Chris Harris

APRIL 15, 1947

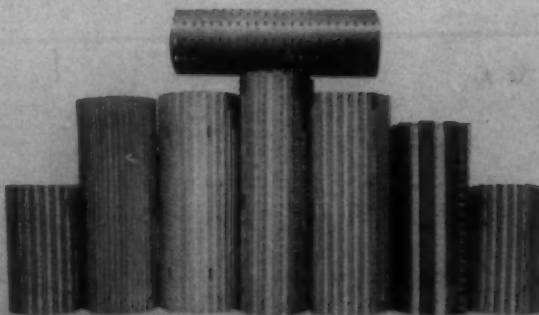
Spinning trouble may originate in the Opening Room

—AND THE "TROUBLE STARTER" MAY BE FAULTY PICKER APRONS

Aprons perform a most important function in the operation of Picking Machinery. If they are of poor quality, or are improperly constructed, they become weak links in your production chain, and expensive delays and imperfect yarn invariably follow.

Our Picker Aprons are made of the very highest grade materials and the assembling is performed by mechanics skilled in this exacting work. That's why they have established an enviable reputation for performance and long life in leading mills from Virginia to Texas.

☆
OUR APRONS
LAST LONGER AND
DO THE JOB BETTER
☆



☆
QUICK DELIVERY
FOR STANDARD PICKERS
FROM STOCK
☆



VERTISING
DEX—PAGE 67

TROY WHITEHEAD MACHINERY COMPANY

Phone 3-9831

CHARLOTTE, N. C.

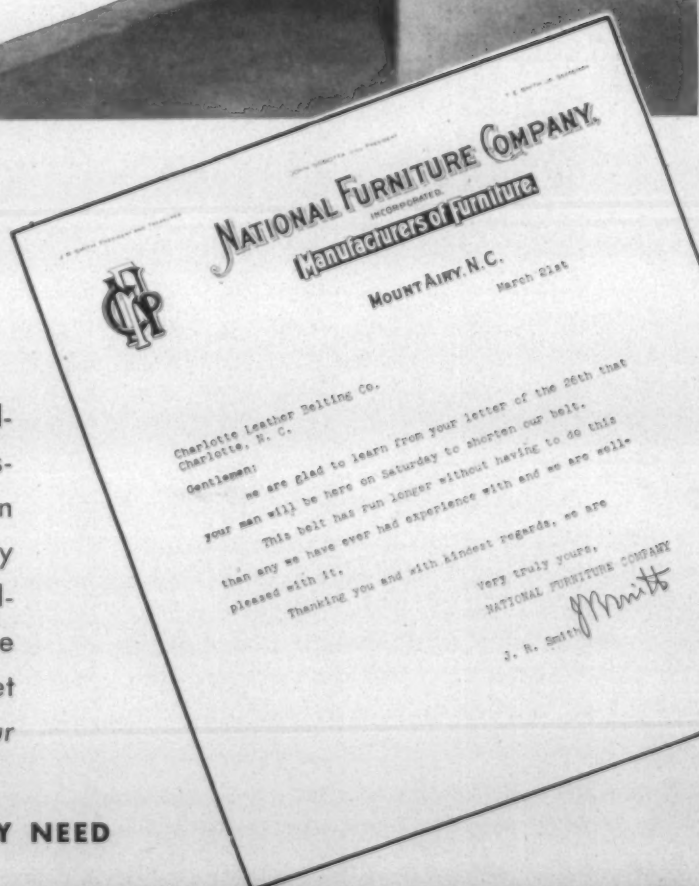
P. O. Box 1245



★ **3-STAR**
★ **LEATHER**
★ **BELTING**

It is doing an outstanding job in leading mills that have power transmission demands similar to yours. When you specify 3-Star you get (1) very high tensile strength, (2) positive pulley grip, (3) minimum stretch (see letter reproduced alongside). Let 3-Star do its exceptional job in your plant.

FINE LEATHER BELTS FOR EVERY NEED
Since 1867



CHARLOTTE LEATHER BELTING CO.

CHARLOTTE, NORTH CAROLINA

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription \$1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.



A Complete Financial Service

COMMERCIAL FACTORS CORPORATION

Fred'k Viator & Achells, Inc.
Established 1828

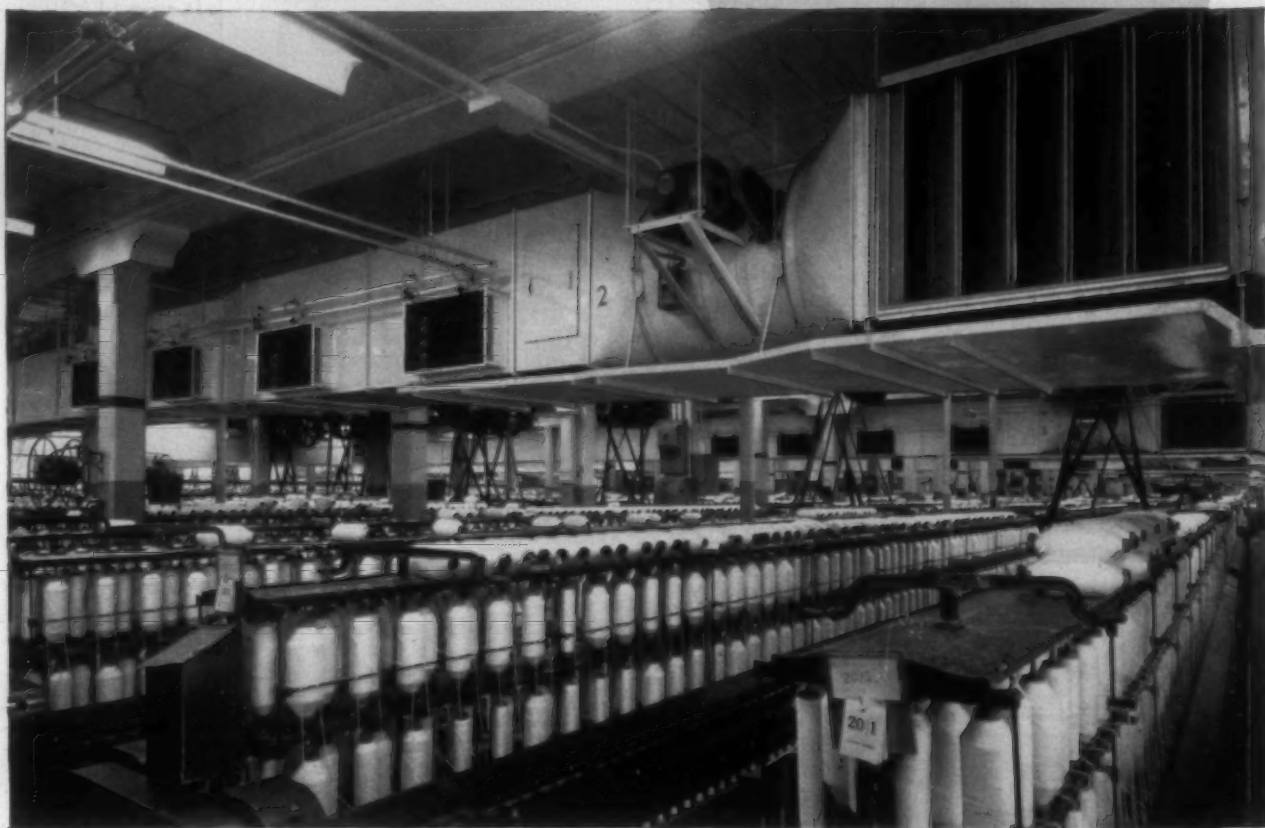
Scheffer, Schramm & Vogel
Established 1838

Peierls, Buhler & Co., Inc.
Established 1893

TWO PARK AVENUE, NEW YORK

EUGENE G. LYNCH, 80 FEDERAL STREET, BOSTON, MASS.
T. HOLT HAYWOOD, WINSTON-SALEM, NORTH CAROLINA

There is
BAHNSON AIR CONDITIONING
TO MEET EVERY TEXTILE NEED



Regardless of the problems encountered, Bahnson has the engineering experience and the specialized equipment to produce a desired air condition in textile mills . . .

Here a Bahnson Air Vitalizer System in combination with the Bahnson Economizer atomizer solves a difficult engineering problem as presented by low ceilings; yet this installation provides the large number of air changes required plus the desired condition of humidity.

The Bahnson Air Vitalizer is a dry duct system of air distribution for circulation and ventilation capable of handling frequent air changes with controlled velocity.

The Bahnson Economizer is a pneumatic self-cleaning cold-water atomizer of recent scientific refinements in principle and design.

Bahnson  *System*
 AIR CONDITIONING ENGINEERS
 THE BAHNSON CO WINSTON-SALEM, N. C.

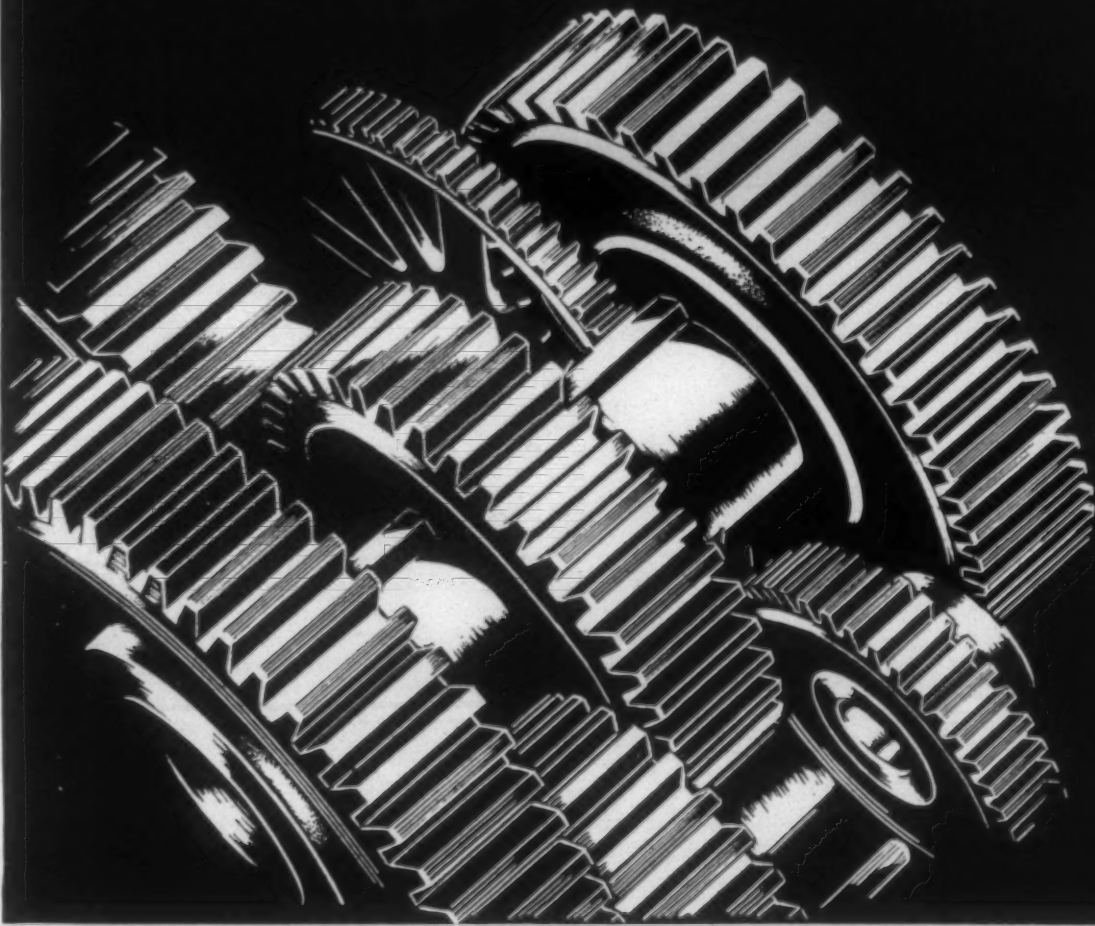
886 Drewry St., Atlanta, Ga.

93 Worth St., New York City
 W. J. Westaway Co., Ltd., Hamilton, Ontario

703 Embree Crescent, Westfield, N. J.
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**FOR INCREASED PRODUCTION...
LOWER OPERATING COSTS...**



choose Tycol engineered lubrication!



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Now more than ever before it is essential to use the best lubricants available — for maximum . . . top efficiency . . . lowest operating cost. That's why more and more operators are choosing Tycol *scientifically engineered* oils and greases.

Whatever your lubricating need — for mine car or tippie, textile loom or spindle, stationary Diesel or locomotive, steam engine or turbine . . . for extreme pressure,

high or low temperature, heavy duty, high speed, or any other service condition — there's a Tycol oil or grease exactly suited to your specific need.

Let us prove Tycol *Engineered* Lubrication efficiency to you . . . show you the extra value in every measure of Tycol oil and grease. Write, or wire your nearest Tide Water Associated office for the facts.

LUBRICATION—"ENGINEERED TO FIT THE JOB"

Combining

HIGH PRODUCTIVE CAPACITY
and QUALITY DRYING—



PROCTOR *Loop* DRYER

One of the most versatile drying machines ever developed for the textile mill is the modern Proctor Loop Dryer. This rugged, high capacity machine combines large scale output with dependably high quality finished results. While it has long been used for the drying of toweling and washed dye-house goods, it has recently proven itself in the drying of spun rayons and similarly finished fabrics. Many recent installations have been designed for high temperatures and are being used with marked success for curing resin treated fabrics. There are many operating advantages that make this machine worth the textile finisher's close investigation. Not the least of these is the air looping device by which cloth is formed into loops over the conveyor girts. The photograph at the right was taken *in action*—and is unretouched. It shows clearly the

uniformity of loops and the careful manner in which these loops are formed. Accurate control of temperatures and air circulation, to suit character of goods being dried, makes possible using the machine for a variety of weights and finishes. Covered conveyor girts that revolve intermittently prevent finished goods from being marred by stick marks.



If the drying of toweling, washed dyehouse goods, finished piece goods—or the curing of resin treated fabrics—is part of your plant operation, you would do well to investigate the details of the modern Proctor Loop Dryer.

PHILADELPHIA 20, PA.

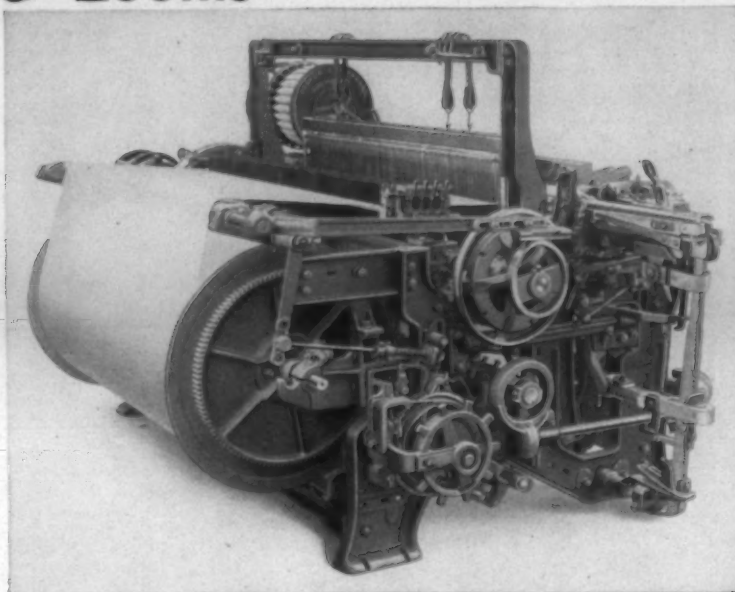
PROCTOR & SCHWARTZ
INC.

Draper High Speed Looms

meeting

today's needs

... and tomorrow's



Super High Speed X-2 Model Loom

today the cry is production, production and still more production. Mills everywhere . . . using looms of every age and vintage are striving night and day to meet the pent up demand. Competition is a forgotten word.

tomorrow . . you will still need production . . . but it will be production on a higher quality, lower cost basis. Markets will be saturated . . . ruthless competition will be the new order . . . only the most efficient will survive.

how you can meet the need

today Keep your looms in the best operating condition. Be sure your oil and cleaning schedules are faithfully carried out . . . check carefully for worn parts when the warp is changed . . . use our latest improved parts. *But above all decide now to completely equip your mill with new X series High Speed Looms. Call or write today and reserve your place on our building list.*

tomorrow . . There will be a new era of competition. You will need these faster running looms with their proven record of producing more and better cloth at less cost. With these looms, plus an efficient organization you will meet tomorrow's needs with confidence.

*Retaining leadership
through research...*



DRAPER CORPORATION

HOPEDALE - MASSACHUSETTS U. S. A.



GOING INTO *Synthetics?*

Ask SACO-LOWELL . . .
and avoid needless delays
and costly experiments

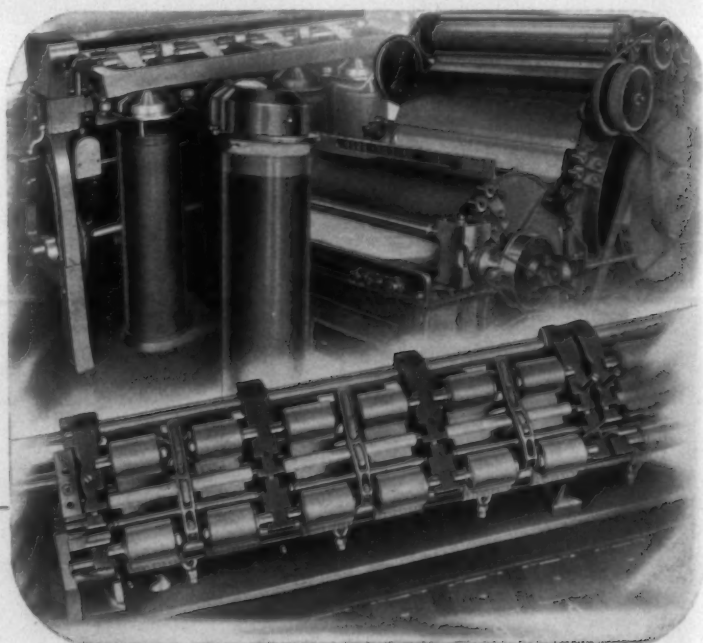
You needn't experiment before going into synthetics.
A good plan is to ask Saco-Lowell . . . for in designing
the specialized equipment necessary to blend, prepare and
spin these new fibres, Saco-Lowell has acquired a very practical
working knowledge of their characteristics,
reactions and correct end uses.

A consultation with our engineers will
help you in developing a background
plan to avoid unnecessary expense, needless
delays and time-consuming experiments.

SACO-LOWELL
SHOPS **BOSTON**

Shops at Biddeford, Maine

Branches: Charlotte • Greenville • Atlanta



AN EXCELLENT
DYE LEVELLING
AGENT

A SUPERIOR
PENETRANT IN
PACKAGE DYEING

DUOFOL-L

**A SULFATED
CONDENSATION
PRODUCT**

RENDERS
THE FABRIC
HIGHLY ABSORBENT

AN
OUTSTANDING
WETTING AGENT

Hartex Duofol L, a sulfated condensation product, is a clear amber oil possessing superior wetting, rewetting, and softening properties. It is clearly miscible with water in all proportions and retains its high surface activity in the presence of hard water, salt, alkali, or weak acids.

Duofol L was developed for instantaneous wetting in baths at all temperatures up to the boil.

It is recommended for dyeing operations in general and specifically for vat and package dyeing to give greater uniformity of shade.

When a solution of Duofol L is dried into a fabric, it renders the fabric highly absorb-

ent (rewetting property). In addition, Duofol L acts as a softening agent making its use doubly advisable in sanforizing operations.

Quantities as low as 4 oz. per 100 gallons have proved satisfactory for most applications.

HART PRODUCTS CORPORATION
1440 Broadway, New York, N. Y.

HARTEX PRODUCTS

Rayon Oils & Sizes
Nylon Oils & Sizes
Kier Bleaching Oils
Finishing Oils
Synthetic Detergents
Conditioning Agents
Scrooping Agents
Splashproof Compounds

Delustrants
Leveling Agents
Cationic Softeners
Cotton Warp Dressings
Wetting-Out Agents
Weighting Agents
Mercerizing Penetrants

Send for free booklet, "Mercerizing and ALKAMERCE - The Ideal Dry Mercerizing Penetrant"



Hart

PRODUCTS

based on research



*It's Always Fair Weather
at Wamsutta*
with AMCO EVAPORATIVE COOLING



WAMSUTTA's fame for quality is not accidental. It results from deliberate measures to assure a superior product. Important among these advantages is an AMCO Humidification and Cooling System.

By reducing excessive temperatures and holding humidity at correct levels—an easy routine with AMCO—ideal processing "weather" prevails in every department. Also important to efficient production is greater comfort for the worker.

Relative humidity is accurately maintained by introducing atomized water spray, and the frictional heat of high speed machines is absorbed by evaporation of this moisture in conjunction with carefully controlled air-flow. No expensive changes are necessary—no air ducts to install—no jump in maintenance costs.

What an AMCO System has done for many leading mills it can do for you. An AMCO engineer will gladly show you how you can modernize your plant simply and economically for better product quality with increased output.

AMCO

HUMIDIFICATION and COOLING

AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC., PROVIDENCE, R. I. • BOSTON • ATLANTA • CHARLOTTE

FEATURES OF AMCO HUMIDIFICATION AND COOLING

- Reduces excessive temperature and holds relative humidity at point best suited to fibre and process.
- Speeds production in high friction (heat) areas.
- Assures even yarn counts and increases breaking strength.
- Gradually increases regain for good roving and consequent better spinning.
- Drafting of fibres smoother and more compact.
- Waste and fly greatly reduced.
- No cumbersome ducts to require cleaning and obstruct light.
- Easier to install—minimum disruption.
- High flexibility to meet changing room conditions.
- Minimum maintenance.
- Amco Evaporative Cooling utilizes your present humidification system.
- Increases worker comfort.

Ponsol*

Golden Orange 3G Paste



On all forms of cotton and viscose-process rayon... for playsuits, wash dresses, work clothes, uniforms, draperies, and upholstery fabrics... "PONSOL" Golden Orange 3G Paste produces rich yellowish shades. It is also important as a shading element for producing khakis, browns, and olives. Resistance to severe washing, chlorine, and light is very good. "PONSOL" Golden Orange 3G Paste can be applied by conventional methods in all types of dyeing equipment and also by the Du Pont Pad-steam Continuous Dyeing Process. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

Du Pont Dyestuffs



*REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

**The
Detergent
that
detours
trouble**



ORATOL L-48

● No guessing when you use Oratol L-48! This sulphonated amide is a powerful detergent with great foaming, emulsifying and wetting properties—gives equally successful results with cotton, wool, silk, rayon, acetates and aralac fibres!

Oratol L-48 is stable in hard water, under acid or alkaline conditions. Its use prevents the formation of insoluble soaps on the surface of dye liquors, and it acts as a dispersing agent for lime soap deposits. As a detergent and scour, in bleaching,

dyeing and finishing, Oratol L-48 is outstanding! Priced low, this highly efficient product is well worth your attention. Samples and information on request.



JACQUES WOLF & CO.
Chemicals **PASSAIC, N. J.**

OTHER PLANTS: CARLSTADT, N. J. • LOS ANGELES, CALIF.
WAREHOUSES: Providence, R. I., Philadelphia, Pa., Utica, N. Y.,
Chicago, Ill., Greenville, S. C., Chattanooga, Knoxville, Tenn.

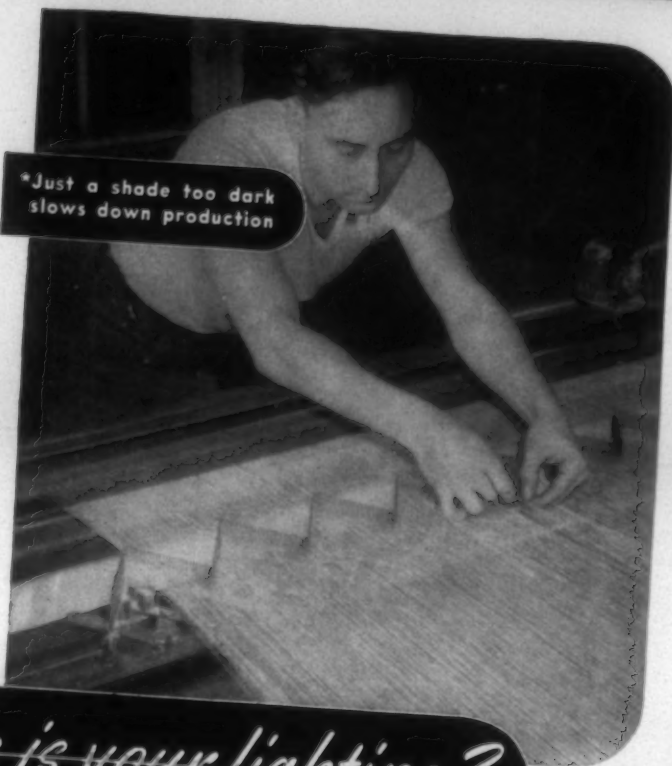
Borderline Vision*

may be dimming
your production picture

DON'T be too sure lighting that looks all right at a glance isn't slowing your production. Borderline Vision—lighting that's just a *shade* too dim—is hard to spot.

You can make sure your light is right easily today by installing Wheeler Skilled Lighting. Skilled Lighting is a carefully engineered product that has been paying dividends to manufacturers since 1881 in increased, *better* work—higher employee morale—and decreased costs. Wheeler

*Just a shade too dark
slows down production

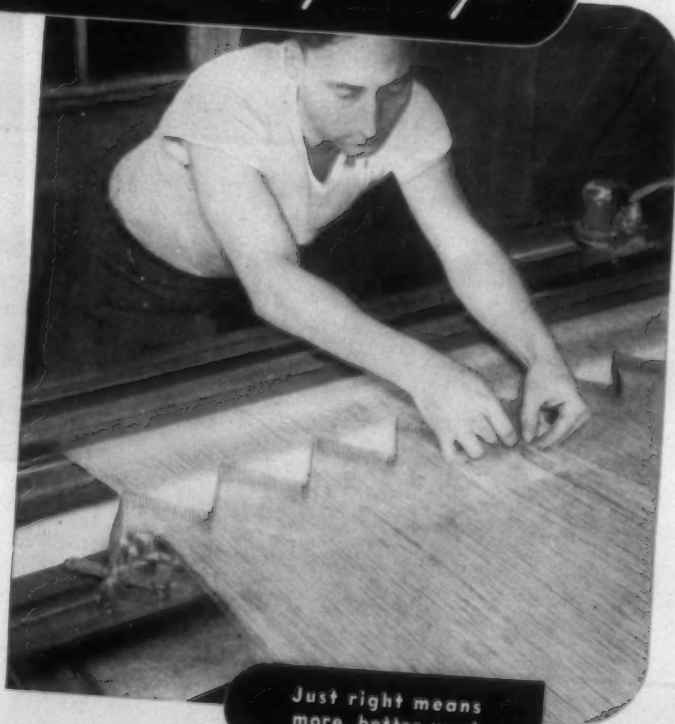


Which side of this line is your lighting?

Reflectors give maximum illumination from standard lamps because they *control* light. Their high reflection factor puts light to work where it belongs—on the job.

You'll see that difference in a brighter production picture when Skilled Lighting goes to work for you. Write Wheeler Reflector Company, 275 Congress St., Boston 10, Mass. Also branch offices in New York and principal cities.

**Distributed Exclusively Through
Electrical Wholesalers**

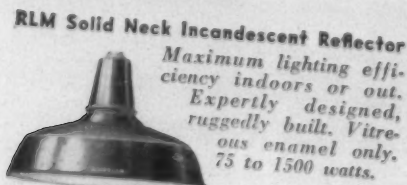


Just right means
more, better work



All-Steel Fluorescent Unit

For 2 or 3 40-watt, or 2 100-watt lamps. Available with open or closed end porcelain enameled reflectors. Broad wiring channel with accessible enclosed ballast. For individual or continuous runs.



RLM Solid Neck Incandescent Reflector

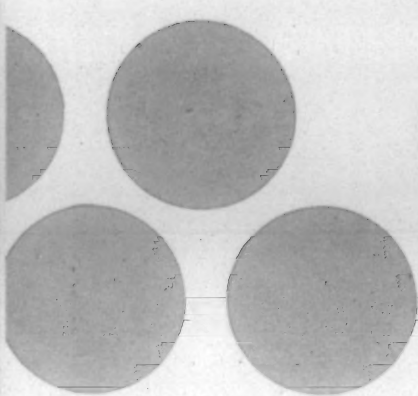
Maximum lighting efficiency indoors or out. Expertly designed, ruggedly built. Vitreous enamel only. 75 to 1500 watts.

Wheeler REFLECTORS

SKILLED LIGHTING

MADE BY SPECIALISTS IN LIGHTING EQUIPMENT SINCE 1881

TEXTILE BULLETIN • April 15, 1947



Houghton is proud to

greatest dollar

in a warp size

HOUGHTON

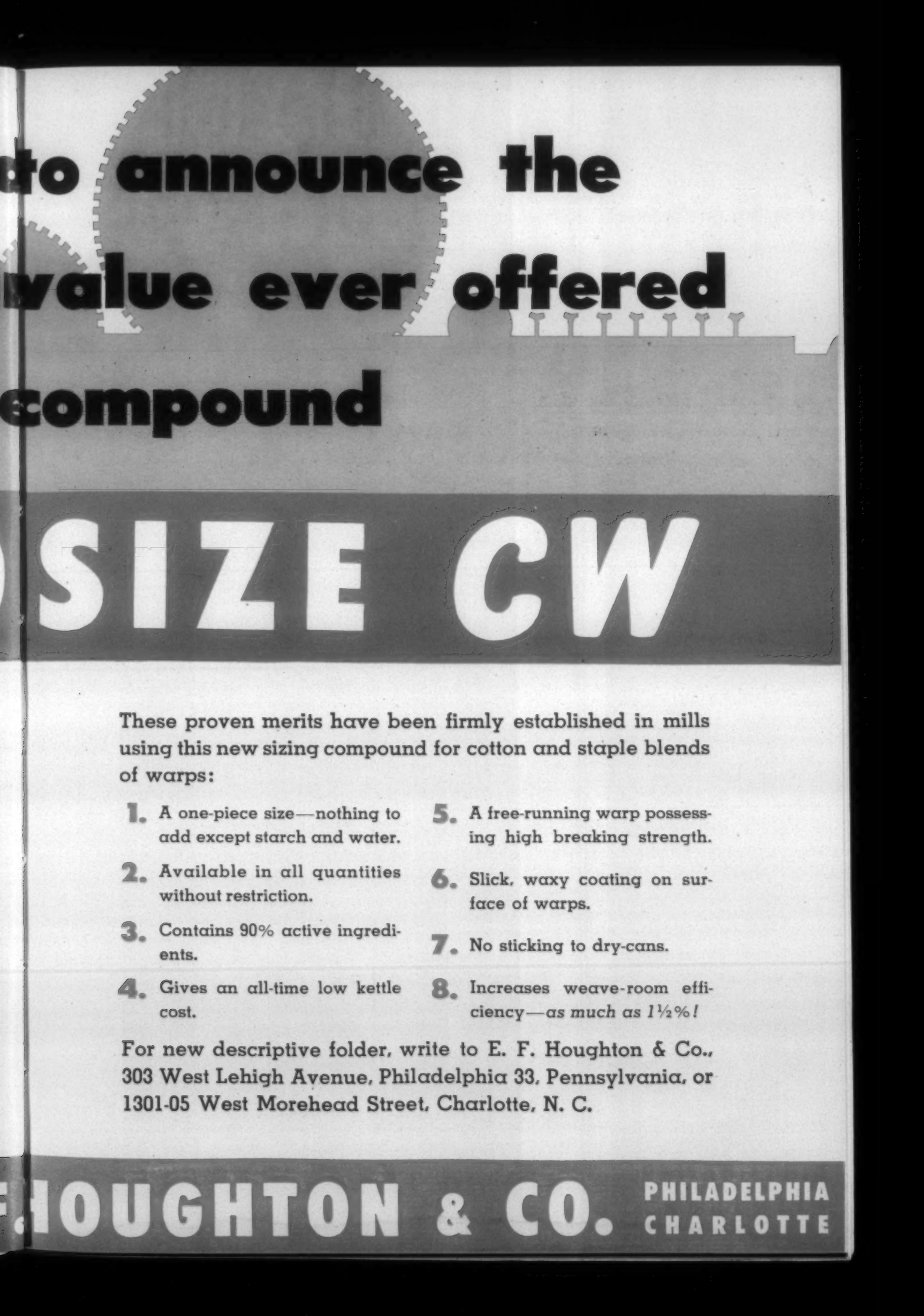
The story behind HOUGHTO-SIZE CW

With drastic shortages of so many basic materials needed for textile processing, the problem of supplying former types of sizing compounds has been growing more and more acute. But Houghton, seeing it coming two years ago, started then to develop and prove in production a warp size softener which would not only overcome that situation, but which would also have other outstanding advantages.

How well that objective has been met can be seen from a study of the merits set forth on the opposite page. Here is another Houghton "first"—a unit product combining softener, binder and plasticizer, which mill experience has proved outstanding in performance and low in cost. *From every standpoint the new HOUGHTO-SIZE CW excels!*

**TEXTILE PROCESSING
PRODUCTS**

E. F.



**to announce the
value ever offered
compound**

SIZE CW

These proven merits have been firmly established in mills using this new sizing compound for cotton and staple blends of warps:

- 1.** A one-piece size—nothing to add except starch and water.
- 2.** Available in all quantities without restriction.
- 3.** Contains 90% active ingredients.
- 4.** Gives an all-time low kettle cost.
- 5.** A free-running warp possessing high breaking strength.
- 6.** Slick, waxy coating on surface of warps.
- 7.** No sticking to dry-cans.
- 8.** Increases weave-room efficiency—as much as 1½%!

For new descriptive folder, write to E. F. Houghton & Co., 303 West Lehigh Avenue, Philadelphia 33, Pennsylvania, or 1301-05 West Morehead Street, Charlotte, N. C.

**E. HOUGHTON & CO. PHILADELPHIA
CHARLOTTE**

Will You Bleach Open Width or Rope?

Get The Facts Before You Decide

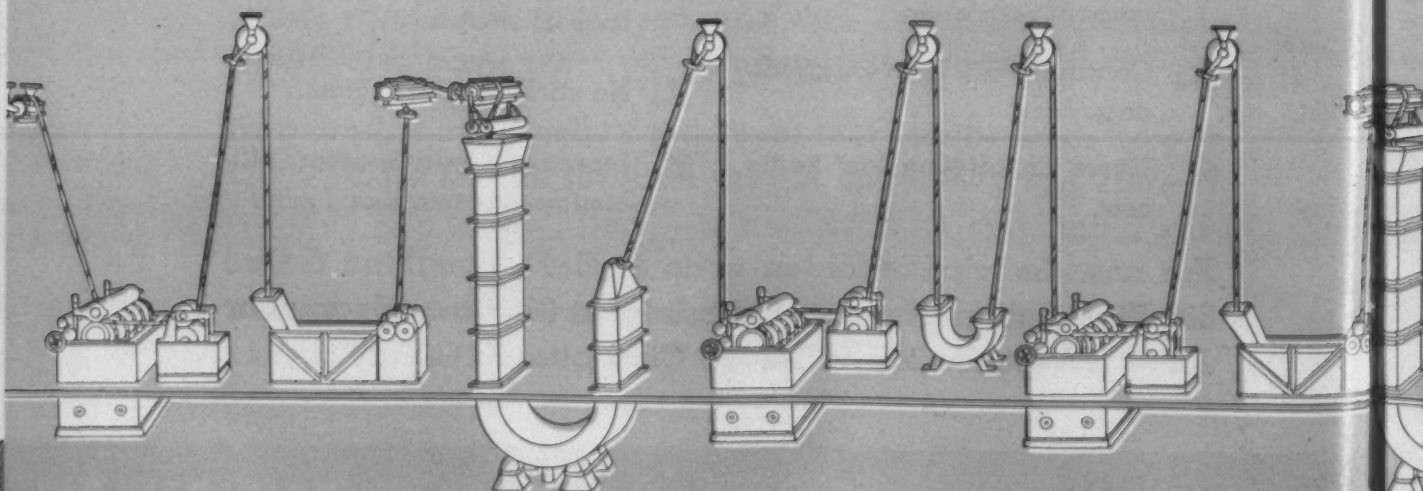
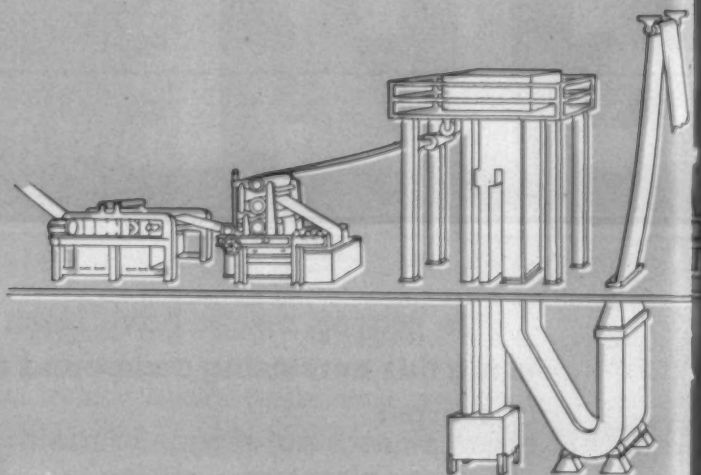
There is no guess-work about planning a continuous bleaching installation with Butterworth performance data as your guide. Open Width or Rope—DuPont or Becco process—Butterworth offers you a

background of bleaching experience unique in the Textile Industry. Butterworth Continuous Bleaching Ranges produce a superior quality bleach with overall savings as high as 40 per cent in

Butterworth Continuous Bleaching

Open Width Range (DuPont Process).

After washing in a 6-Roll Horizontal Washer, the cloth is passed through a Caustic Saturator, where it is thoroughly impregnated with caustic soda solution. Cloth is then steamed in heater tubes and plaited down into the J-box. Guide rolls are at the top of each leg of the heater tube. Leaving the J-box the cloth is thoroughly washed in three 6-Roll Horizontal Washers, which will bring the alkalinity of the cloth down to $\frac{1}{4}$ of 1%. Cloth next goes into a Peroxide Saturator where it is impregnated with a solution of hydrogen peroxide. The cloth now passes through a heater tube and goes on into a J-box where it remains for approximately one hour to allow the cloth to bleach thoroughly. Removed from the J-box, the cloth is given a final wash in two 6-Roll Horizontal Washers.



chemicals, steam, labor and production time. Inspection windows in the J-boxes enable you to eliminate many of the seconds caused by wrinkles, improperly mixed chemicals, and other headaches common to older bleaching methods.

If space limitations are an important consideration in your mill, remember this: a Butterworth Continuous Bleaching Range

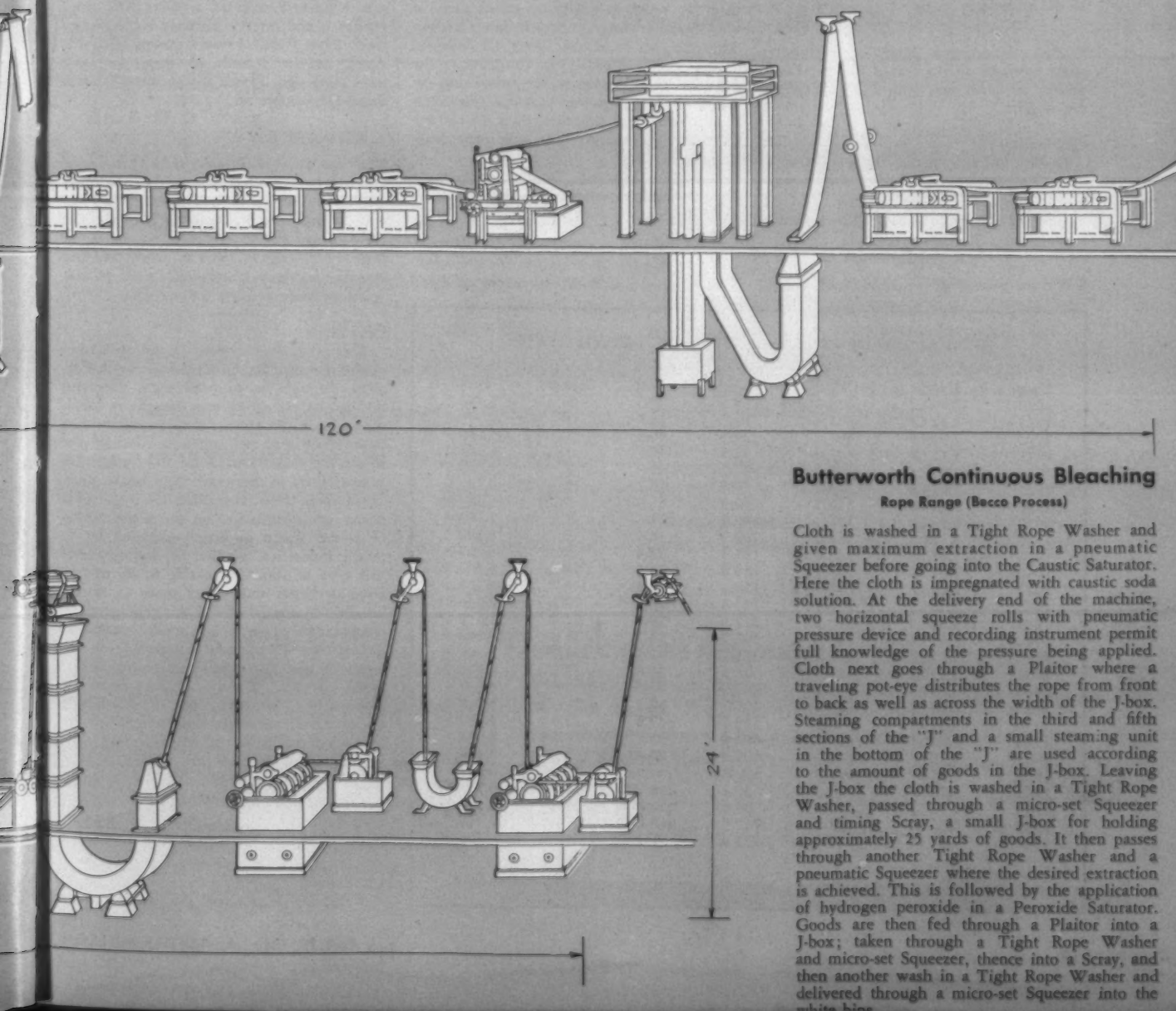
requires only 55 per cent of the floor space necessary for an equal production with kier boiling.

Butterworth engineers will be glad to work with you on your bleaching problems. Write us today.

Butterworth

H. W. Butterworth & Sons Company, Philadelphia 25, Pa.

TEXTILE FINISHING MACHINERY COMPANY DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N. C. - W. J. Westaway Co., Hamilton, Ont. ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pfeiffer & Co. - BOLIVIA: Schneider & Cia., Ltda., La Paz - CHILE: Schneider & Cia., Ltda., Santiago - COLUMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrill, Havana - ECUADOR: Richard O. Custer, S. A., Quito - FRANCE: Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: I. Slobotsky, Mexico, D. F. - MIDDLE EAST: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson, Goteborg - URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.



Butterworth Continuous Bleaching

Rope Range (Becco Process)

Cloth is washed in a Tight Rope Washer and given maximum extraction in a pneumatic Squeezer before going into the Caustic Saturator. Here the cloth is impregnated with caustic soda solution. At the delivery end of the machine, two horizontal squeeze rolls with pneumatic pressure device and recording instrument permit full knowledge of the pressure being applied. Cloth next goes through a Plaitor where a traveling pot-eye distributes the rope from front to back as well as across the width of the J-box. Steaming compartments in the third and fifth sections of the "J" and a small steaming unit in the bottom of the "J" are used according to the amount of goods in the J-box. Leaving the J-box the cloth is washed in a Tight Rope Washer, passed through a micro-set Squeezer and timing Scray, a small J-box for holding approximately 25 yards of goods. It then passes through another Tight Rope Washer and a pneumatic Squeezer where the desired extraction is achieved. This is followed by the application of hydrogen peroxide in a Peroxide Saturator. Goods are then fed through a Plaitor into a J-box; taken through a Tight Rope Washer and micro-set Squeezer, thence into a Scray, and then another wash in a Tight Rope Washer and delivered through a micro-set Squeezer into the white bins.

the bulletin board

Questions, answers and other material submitted by the readers for use in this column should be addressed to Field Editor, Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C. Material need not be in any particular form, since it will be properly edited before publication.

LINT FROM THE OPENING ROOM

Gentlemen:

... Can you furnish me with information on the consumption of cotton in the U. S. in 1946. . . . ?

Contributor No. 20

¶ 1946 consumption figures for all fibers were received only a few days ago. These figures for every year since 1920 appear below.—Eds.

Gentlemen:

During the years before the war I several times enjoyed playing in the golf tournament sponsored by your company. . . . I am wondering whether you have plans to renew this feature.

CONTRIBUTOR NO. 21.

¶ We are wondering whether there is suffi-

cient interest in the tournament to warrant its resumption. How about it?—Eds.

Sirs:

We were very happy to see the fine treatment of the papers by Mr. Haardt and Mr. Staudt of Forstmann Woolen Co. in your March 1 issue. These were among the papers we sent you from the proceedings of the National Safety Council last October. However, we wondered about the omission of any credit to either the Congress or the National Safety Council, the sponsoring organization. This purely practical consideration on our part, however, does not detract from our appreciation for your continuing interest in safety.

JACK HORNER, Director of News,
National Safety Council,
Chicago, Ill.

¶ A well-deserved reprimand, Mr. Horner, and our sincere apology for the omission. Partial excuse: a wedding in the editorial

family while that issue was being prepared, with resultant confusion in the ivory tower.—Eds.

Gentlemen:

I am not receiving my TEXTILE BULLETIN regularly and when I do receive it, it is always several days later than my friends are. I haven't received a BULLETIN since March 1, and my friends have received two since then. I still haven't gotten mine for April, and my friends got theirs two and three days ago. Please advise me what you think the trouble is.

C. W. GAINER.

Raleigh, N. C.

¶ As we have apologetically stated several times before, TEXTILE BULLETIN has been running somewhat behind schedule for the past several months. However, Mr. Gainer, there should be no more delay in receipt of your copies than in those of other subscribers. Suggest you check with your friends again on their delivery dates.—Eds.

Dear Sir:

This office is interested in the utilization of the raw products produced in North Carolina through its manufacturing processes to ultimate use. With this thought in mind, we are trying to prepare data on starch from both white and red potatoes. One of the important items would be its commercial potentialities in the textile field in the state. Your name was furnished as a possible source of information on the consumption of potato starch in North Carolina by its textile industries, whether the industry finds this type of starch adaptable to its use, as good or better than other types of starch, possible continued use of this type product, comparative quantity of potato starch required over other types of starch to do the same job and also comparative price differential, if any. We would appreciate any information you might have on the above questions, or any suggestion where this information might be secured.

D. D. BARBER, JR.,
N. C. Dept. of Conservation
and Development.

¶ Can any of our readers help Mr. Barber?—Eds.

Gentlemen:

Yesterday I received the package con-

ANNUAL USE OF PRINCIPAL FIBERS IN UNITED STATES
(In Millions of Pounds)

Year	Cotton	Wool	Rayon	Silk	Linen	Total
1920	2,821.1	314.2	8.7	29.3	†	3,180.3
1921	2,422.5	325.1	19.7	43.0	†	3,598.3
1922	2,909.8	406.5	24.7	48.3	†	3,389.3
1923	3,117.0	401.0	32.6	47.7	†	3,529.6
1924	2,637.1	342.2	42.2	48.0	†	3,069.5
1925	3,074.9	328.9	59.1	66.7	†	3,529.6
1926	3,214.8	342.7	60.6	65.9	†	3,684.0
1927	3,584.0	344.1	100.0	73.3	†	4,101.4
1928	3,184.2	333.2	100.5	74.9	†	3,692.8
1929	3,426.3	365.6	131.3	82.4	†	4,005.6
1930	2,610.9	263.2	118.8	76.0	34.7	3,103.6
1931	2,656.6	311.0	159.0	77.3	28.7	3,232.6
1932	2,463.3	230.1	155.3	70.9	27.3	2,946.9
1933	3,052.5	317.1	217.3	59.8	31.4	3,678.1
1934	2,655.4	229.7	197.2	58.5	28.8	3,169.6
1935	2,754.7	402.5	258.7	62.3	31.5	3,509.7
1936	3,470.2	383.3	322.6	57.8	35.9	4,270.3
1937	3,657.1	353.3	307.9	53.6	35.5	4,407.4
1938	2,904.4	824.4	327.1	57.8	20.7	3,588.4
1939	3,629.7	396.5	458.7	47.3	25.5	4,557.5
1940	3,953.6	411.1	482.0	35.8	17.5	4,916.3
1941	5,187.3	652.2	591.8	25.0	†	6,456.2
1942	5,636.7	613.8	620.8	nominal	†	6,871.3
1943	5,269.0	628.0	656.1	nominal	†	6,553.1
1944	4,787.5	623.9	704.8	nominal	†	6,116.2
1945	4,508.2	648.2	767.5	nominal	†	5,923.9
1946	4,844.7	748.4	875.4	6.3	†	6,474.8

† Not available.

For Superior
**ANILINE
BLACKS**

1. GOOD PRINTING PROPERTIES
2. MINIMUM TENDERING OF THE FABRIC
3. DENSE, PLEASING TONE OF SHADE
4. EASE OF PREPARATION
5. FREEDOM FROM GRIT

Order... CYANAMID'S AERO* BRAND

YELLOW PRUSSATE OF SODA

[Sodium Ferrocyanide $\text{Na}_4\text{Fe}(\text{CN})_6 \cdot 10\text{H}_2\text{O}$]

YELLOW PRUSSATE OF POTASH

[Potassium Ferrocyanide $\text{K}_4\text{Fe}(\text{CN})_6 \cdot 3\text{H}_2\text{O}$]

PRUSSATE ANILINE BLACKS are adaptable for printing cotton and rayon in a wide variety of styles in combination with vat dyes, rapid fasts and steam colors. This process is most effective in reducing tendering of the fabric, and minimizes the electrolytic effect on the doctor blade.

When Ordering Prussates Specify AERO BRAND, your assurance of . . .

1. Uniformly high quality over 99% Yellow Prussate of Soda or Yellow Prussate of Potash.
2. Close chemical control from basic raw materials to the finished product.
3. Small crystalline form dissolves readily in hot or cold water.

For dependable supply . . . for authoritative technical service . . . call on Cyanamid.



**Industrial AMERICAN
Chemicals CYANAMID
Division COMPANY**

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE:

Penetrants, Softeners, Finishes, Sizing Compounds, DECERESOL** Wetting Agents, PARAMUL* 115 Water Repellent, and other specialties and Heavy Chemicals. For low-cost chemical equivalent of distilled H_2O . . . FILT-R-STIL** Demineralizing Units.

*Trade-mark **Reg. U. S. Pat. Off.



Not Just "Any Traveler"...

Ring travelers are like people in many respects . . . some are better made for certain jobs than others . . . some have built-in qualities that assure their success in any job . . . some have inherited a reputation for fine performance that makes them a sound investment whatever the task!

That's why we say, "just as you wouldn't select 'any man' for an important job in your plant, don't select 'just any traveler'!"

To be certain every time, select the travelers that are proved better in any spinning or twisting job, that do have built-in qualities that assure their success in these jobs, that do own a reputation for "fine performance" always, under all conditions!

That's right: DARY
RING TRAVELERS!

See a Dary
representative now!

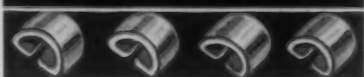


The DARY RING TRAVELER CO. TAUNTON, MASSACHUSETTS

JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.

JOHN H. O'NEIL, BOX 720, ATLANTA, GA.

H. REID LOCKMAN, BOX 515, SPARTANBURG, S. C.



taining the complimentary copy of the 1947 edition of *Clark's Directory of Southern Textile Mills*, and I sincerely appreciate your kindness in sending me this useful publication.

We could not run our office without this directory, and in order that all the members of our staff may have them individually, we will appreciate your sending us eight copies, along with your invoice to cover the cost of them.

CONTRIBUTOR No. 23.

Dear Sir:

. The [Clark's] Directory is of much aid to us in our contacts with the Virginia and North Carolina textile industry, and we use it frequently and to much advantage.

W. R. JOYNER, Manager,
Corn Products Sales Co.

Greensboro, N. C.

I am well acquainted with the nature of the articles appearing in a number of textile magazines, and I think I am quite familiar with the requirements of these journals. I agree that the dyeing and finishing section of the textile industry is not receiving as much attention as it should. Whatever may be the reason or result, it is my careful opinion that you will have more difficulty in obtaining reliable and factual information on dyeing and finishing than on almost any other phase of the textile industry. Most technicians actively engaged in the work, especially those employed by larger companies, avoid publication; and even in our associational meetings it is often difficult to get expressions from those with broad experience. The result is that most of the articles published lately on dyeing and finishing have been either misleading or too general.

CONTRIBUTOR No. 22.

[This letter is in answer to a request that Contributor No. 22 prepare a series of articles on the dyeing and finishing of textiles. His interest is obvious, but apparently he was forced to decline the invitation because of his company's failure to put its approval on the publication of technical articles by its employees. Are many of our other readers forced to keep "secrets"?—Eds.]

MISCELLANY

THE SECOND HAND'S DREAM

I dreamed that I had died at last
And gone to my reward,
A job in Heaven's textile plant
On a golden boulevard,
The mill was built of Marble,
The machines were made of Gold,
No one there ever got tired
And no one ever grew old,
The Overseers all were Saints,
Like Statutes on a shelf,
The Superintendent I declare
Was Abraham himself,
The Spinners and doffers were Angels,
They flew around on wings,
Carefree and happy each one there
Made hallelujahs ring,
The Section men were Baptist preachers
Calling everyone brother,

They stood on the spare floor all day long
Baptizing one another,
The ends never did come down,
The roving never ran out,
The doffers doffed one frame per year.
You should have heard them shout.
They only worked four-hour shifts
And just three days a week;
They paid off every hour and
The wages were not cheap.
The sweeper drew the least of pay
And that was nothing slack;
He drew a million bucks a week
And no withholding tax.
I thought that I had found a place
Where folks were satisfied;
I didn't know until too late
That they were organized.
You can imagine how I felt
When they walked out on strike;
I found the union Leader
All ready for a fight.
I asked the reason for this seeming
Unholy breach of peace.
I almost fainted when he said,
We want a wage increase.
A wage increase I cried aghast,
When no one does a thing.
Spinners are being forced, he claimed,
To fan back guides with their wings.

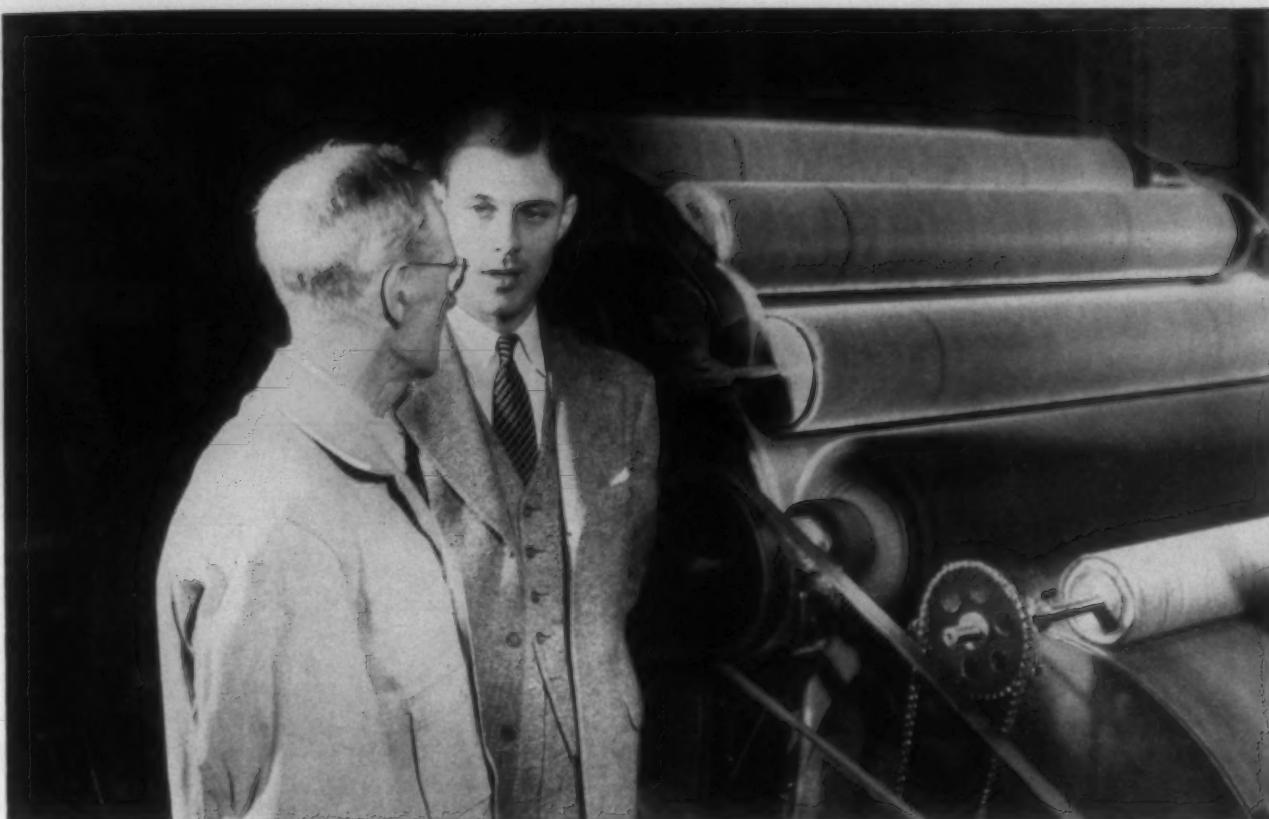
—JAMES J. MCMAHAN.

Smugness—A feeling the radio fan assumes when he has answered a relatively easy question a second or two before the victim on one of those radio quiz programs.
—*The Swirling Column, American Monorail Co.*

No Sale—In Hackensack, N. J., a salesgirl, subpoenaed for jury duty, replied politely: In reply to your letter, I am not interested in your offer. I have a good job now.
—*Time.*

SAFETY RULES FOR THE TRAVELING MAN

1. Upon arriving at your hotel room, investigate all possible means of emergency exit.
2. Read carefully any instructions to guests posted in room.
3. Be as careful in a hotel as you would be in your own home. Do not smoke in bed.
4. If you detect smoke or evidence of fire give immediate information to the management.
5. Close transom door at once.
6. Take time to plan your exit.
7. Feel the door before you open it. If it does not feel hot, open it slightly. Hold head away, brace door with foot. Put hand across opening to test heat of air.
8. If hallway appears safe, use the already planned exit.
9. If hallway is not safe, stop up any openings or cracks by which smoke may enter, using wet towels, sheets, blankets, mattresses, etc.
10. Open window slightly and stay near it. Keep calm, avoid hysteria. Do not jump out. Many lives have been saved by closing doors and transoms, blocking all openings for hot air and gases from hallway, and calmly awaiting rescue.



"TUFFER" Men Help Carders to get *Better Results*

HOWARD-MADE products, backed by 80 years experience in the manufacture of card clothing, are only part of the service we offer you. We know that mills welcome assistance that speeds up production, makes tough jobs easier, and increases efficiency.

That's why we invite you to talk over your problems with a Howard representative. You will find him qualified to help you get better carding results. Your dealings with him will be confidential in every way—and, of course, there's no obligation on your part.

Contact your nearest Howard plant or branch office.

HOWARD BROS. MFG. CO.

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas

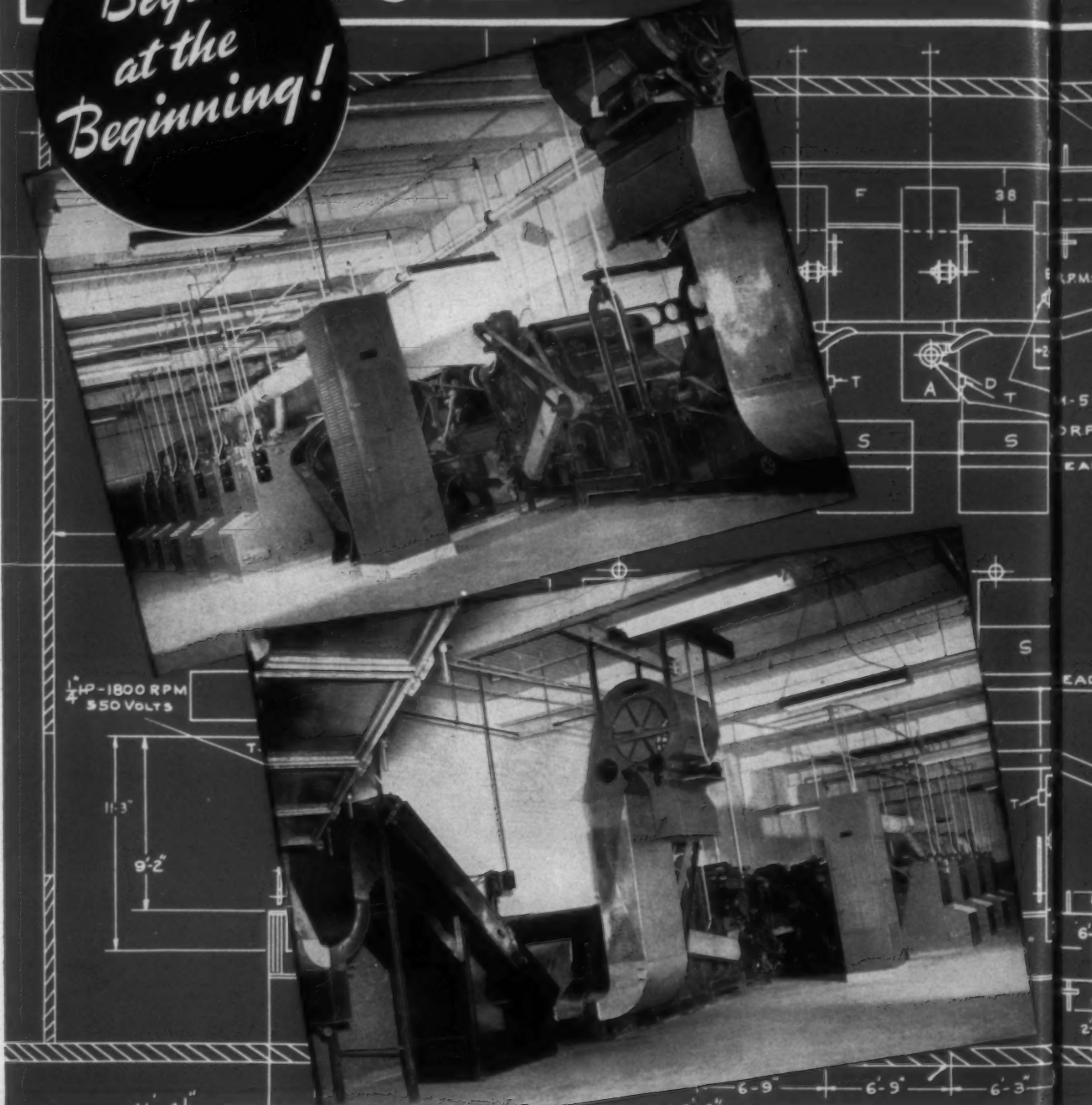
Direct Representation in Canada

A-5

TUFFER
CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

*Begin
at the
Beginning!*

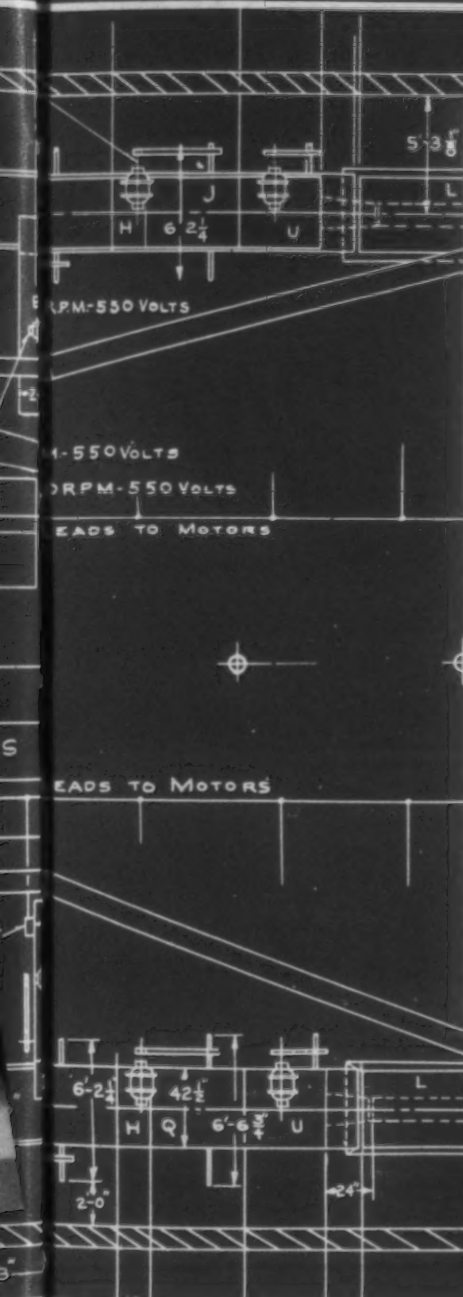


H & B AMERICAN

Builders of Modern Times

FACTORY, EXECUTIVE OFFICES AND EXPORT DIV

Room Machinery



THE OPENING ROOM shown here demonstrates how a modern mill begins at the beginning. It was laid out by H & B engineers, cooperating closely with the mill management, to provide the last word in opening and cleaning efficiency.

Here, Blending Feeders, Waste Feeders, Hopper Bale Openers, 30" Opening and Cleaning Units, Cleaning Trunkings and Superior Cleaners work in perfect harmony and unison — controlled by electrical and mechanical timing devices — to supply six lines of H & B A-1 One Process Pickers with the right amount of raw stock at all times.

Ample floor space behind the Blending Feeders allows a continuous blend of from 30 to 50 bales, while H & B equipment, engineered with skill and ingenuity, guarantees a flow of raw stock that is really opened and cleaned.

This service is available to any mill which, like this one, feels that it is necessary to *begin at the beginning*.

MACHINE CO.

Textile Machinery

PORT DIVISION

PAWTUCKET, RHODE ISLAND, U.S.A.

BRANCH OFFICES

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815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING
CHARLOTTE, N. C.
1201 JOHNSTON BUILDING



*"Young Man
with a
HORN"*

What appears to be a glass saxophone in the hands of a Sinclair Laboratory technician is in reality an important instrument used in protecting you against lubricants with low resistance to oxidation.

It's part of Sinclair's apparatus to determine oxidation rate of both non-additive and additive type lubricants. It is used constantly by Sinclair in Research and Refinery Control to assure you of maximum lubricant life without formation of harmful corrosive acids, varnish or carbon deposits on working surfaces.

Resistance to Oxidation is a prime requisite of all good lubricants. Sinclair's "Young Man With A Horn" — and others equally painstaking — stand guard constantly at Sinclair Laboratories to assure you that any Sinclair Lubricant you buy has the very highest degree of quality necessary for maximum operating efficiency.

Sinclair Textile Lubricants

LILY WHITE OILS

For Spindles

NO-DRIIP LUBRICANTS

For Coulier Motion

Rocker Arms, Gear and Camshaft Bearings,
and Half-speed Shock Absorbers

RUBILENE

For Air Compressor and Vacuum Pumps

COMMANDER OILS

For General Mill Lubrication

BEARING GREASE AF

For Anti-Friction Bearings

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SINCLAIR
Lubricants for Industry

• FINEST CRUDES + EXPERT RESEARCH

and MANUFACTURING CONTROL = OUTSTANDING PERFORMANCE



Business And Industrial Problems In Obtaining High-Gear Production

By DONALD B. TANSILL, Vice-President, Pepperell Mfg. Co.

—Abstract of address before American Retail Federation—

LET'S start our analysis with the plant background of cotton goods. Immediately after World War I we accelerated the migration of our industry from New England to the South. A feverish mill building program was started and continued for almost ten years. We ended up with far too many spindles. When the resulting rugged competition showed up, we started scrapping the less efficient machinery which turned out to be in the then high-cost New England area. In the last 20 years we sold over 15,000,000 spindles to the junk man. In November of last year we were down to about 22,000,000 active spindles from a top of 37,939,772 in place in 1925.

In spite of these seemingly discouraging figures, I am proud to place our production record alongside. An improved labor supply enabled us to show a substantial monthly increase in cotton consumption from March, 1946, on. So last year we used 9,827,000 bales of cotton and made about 10,250,000,000 square yards of cloth as against an approximate 8,500,000,000 square yard average for the five years 1936 through 1940. Currently production is consuming cotton at a yearly rate of more than 10,000,000 bales, which is great progress from the pre-war six to 61/2 million bales. Two factors account for this extraordinary happening. Machine scrapping left only the best equipment which up to wartime was constantly being replaced with the most modern apparatus and, secondly, we learned of the cost savings that go along with two and three shift operations.

We have not seen any venture capital that is yearning for an opportunity to build additional cotton mills, so there is little or no chance that we will again cut the ground from under our feet by a new period of expansion. However, there will be plenty of business for machinery manufacturers because our equipment took a terrific battering in producing the urgently needed wartime yardage. Millions of spindles and tens of thousands of looms were actually operated 24 hours a day and seven days a week for extended periods. In many instances our machinery was subjected to further severe strain, because we had to produce textiles for which it was never designed. As a result, a fair portion will be scrapped as worn out, just as soon as replacements can be installed. This job will take quite a few years.

But still we have to answer how we can make it profitable for our customers to take the 11,000,000,000 square yards or more that we expect to produce this year, as against the pre-war 8,500,000,000. As we proceed I expect to unfold that picture.

From the late 1920s on we were a lean industry. Every dollar counted. We did not have the wherewithal to supplement our manufacturing with the variety of selling and promotional ideas which are now definitely in motion. Here's the first plus factor. We have nearly 10,000,000 new American consumers because of the increase in population since 1939. And, boy, do those youngsters use cotton goods!

Another happy note! At some point in the 1950s cotton farming will be well mechanized. Supplementing the planter, there have been perfected other machines such as mechanical pickers and choppers. Most ingenious of all, the flame weeder, which goes up and down the rows of cotton, spurring jets of live flame at just above ground level to burn out the weeds, yet without damage to the cotton plant itself. So, again, American engineering steps up to help us use American cotton in volume, in spite of increased cultivation in foreign countries where cheap farm labor has provided the incentive for more and more cotton acreage.

I am delighted to tick off an additional important point. Our fundamental and applied research has made tremendous progress and from being a pre-war poor boy in those essential activities, we compare favorably with all but two or three industries in America. Pepperell, like many others, operates its own research and testing division.

On a co-operative basis, through such agencies as the Institute of Textile Technology at Charlottesville, Va., the industry is attracting to its research problems the brains and talents of some of the nation's foremost scientists in chemistry, physics and higher mathematics. Closely allied to this work and indeed directly emanating from it, is the emphasis on engineering in our basic thinking. We are all accustomed to its dominance in construction, the automotive, transportation and other industries but today the engineering of cotton fabrics for specific end-use is also a reality.

The ultimate consumer and even the alert retailer can have no conception of the tremendous range of studies

going on every day in the blending of fibers—again, all in the interest of producing a better product. The characteristic of rayon, Vinyon, nylon and aralac are being forever analyzed and tested, not only in the laboratory, but in cotton mills so as to find out just what are the best proportions of fibers for producing the best possible fabric for a certain task. What has been done to date represents no more than a good start.

Going hand in hand with the rate of development of blended yarns and fibers is refinement of various special finishes and the introduction of new ones. In this work the scientists in the textile industry have two thoughts in mind: (1) the improvement of existing finishes by making them generally more permanent in character; and (2) the endowment of fabrics with added qualities such as comfort and durability.

With respect to the former, there are now on the market flame-retardant finishes capable of withstanding repeated launderings and dry cleanings. Formerly the chemicals used would disappear on the first washing or cleaning. Certain end uses such as curtains and draperies in public places call for this type of safety treatment. As yet no need has developed for flame-retardant finishes in the usual clothing and household textile items. The proposed legislation strains itself pretty hard to get after just a few cloths and would put a terrific expense burden on the mass of goods produced by the industry. The consumer would finally foot that bill. It would be just as reasonable to hold the tire maker responsible for the skidding resulting from fast driving on a wet pavement. Common intelligence says you shouldn't fall asleep in bed with a lighted cigarette in your hand. Nor should one stand too close to an open fire when wearing a flimsy dress. An educational campaign would make more sense.

The amazing progress made during the war on mildew-proofing is an example of the second point. The serviceable life has been greatly extended on upholstery types of fabrics used on summer porch and outdoor furniture.



Here are two interesting major steps which are being taken with an eye to assuring our market. The first is a public relations campaign, designed to bring the nation up to date in its concept of both the textile industry and its products. This is already off to a fine start and seems sure to revise in our favor, the average citizen's thinking about our place in both the national and local scheme of things. It stresses the work opportunity in mills and recites the splendid working conditions. On this last score it has already brought results in numerous communities.

The second major source of promotion on a co-operative basis takes shape in the co-ordinated program of the Cotton-

Textile Institute and the National Cotton Council, which has one broad objective—to increase the domestic consumption of cotton for both new and established uses. This action gains expression in: (1) advertising in behalf of styled cottons in the leading consumer magazines; (2) the annual observance of National Cotton Week for a concentrated selling of cotton textiles on a nationwide basis; (3) a broad range of educational efforts among important trade and consumer groups; and (4) a many-sided campaign to keep the trade and consumers ever-conscious of the unique combination of cotton's attributes and characteristics that result in four times as much of that fiber being consumed in this country annually as all others combined.

Collaterally with this industry effort, there is a greatly increased expenditure for advertising on the part of individual manufacturers. Twenty years ago textile advertising was a joke. Ten years ago it had barely moved out of the Joe Miller category. Today the advertising money spent by our basic industry and its complementary units is a most magnificent sum. It has a real pulse beat. It arrests your attention. You are constantly being urged and encouraged and persuaded to buy our products.

Some years ago New York's biggest department store made history and at the same time a great sales record, by regularly promoting many items that had not been previously considered worth advertising. In the same way the textile industry today is pushing with vigor and enthusiasm, fabrics that had earlier been regarded as not requiring any special effort. Work clothing materials are a case in point. Manufacturers of those goods are no longer content to rely on their garment customers to publicize the merits of their cloth, but today are spending large sums annually in advertising in both trade and consumer media of mass circulation. Returns from such investments are heightened by intelligent co-operation between fabric manufacturers and cutters in the labeling of garments and this, incidentally, is not without benefit to the retailer.

One more milestone—the industry has gradually abandoned many of the wartime constructions and we are now manufacturing good, wanted merchandise. Old friends are coming back on to the retail counter. They will provide a sales stimulant. Colored bed sheets are an example. I personally believe they are capable of doing as much for domestic departments in the way of both increased sales and profits, as the introduction of night games has done for baseball. Good towels can be had for less than a dollar. More shorts and shirts of the right constructions are showing up all the time.

Important sums of money have been spent in working out a real improvement in packaging materials and methods. As a result, your textile suppliers are now putting up sheets and pillow cases, towels, hosiery, blankets and a great array of household items in vastly improved containers which lend themselves readily to self-service at the counter. Anything that improves the performance of sales clerks is certainly welcome to you. A number of textile manufacturers are working very closely with their retail distributors in developing the right kind of fixtures so as to expedite self-service selling in domestics and other departments of stores. Take sheets and pillow cases. Believe me, Pepperell's present packages were not adopted until store and consumer preferences had been most diligently sought out. Not only do they make the retailers' selling easier, but they offer the hope that more and more of the benefits from mass display,

Ciba DYESTUFF GLIMPSES

In all science there is nothing more fascinating than the production of color from the sticky black substance we call coal tar. Many and various, however, are the steps that lead to the present day dyestuffs which help create our modern way of life by making clothing more cheerful, women more beautiful and life itself more enjoyable.

First comes the careful distillation of the coal tar to produce products like benzene, toluene and naphthalene. These are basic materials but Ciba has always recognized the fact that only the purest parent substances can give birth to dyestuffs of Ciba's standard. A good start is essential! As a result, these products and others developed by further processing are tested for purity again and again — as for instance, by determining the melting point.

For this purpose a little glass flask is necessary, fitted with a thermometer and a stirring appliance and heated by a small gas jet. The tiny glass tubes containing the substance under test are hung in the flask, dipping into the sulphuric acid or molten paraffin wax with which it is filled.

Let us suppose that a sample of naphthalene is being examined. If it melts at 80°C . exactly, the chemist is satisfied, for the naphthalene is pure. Should it melt at 77°C ., however, it is impure and must be purified further. Every pure substance has a definite, known melting point. While naphthalene melts at 80°C ., anthracene, for example, must not melt below 217°C .



NEOLANS ON WOOL MEAN QUALITY RESULTS
with MINIMUM EFFORT

better STARCH through research

Auxiliary Room to Product Development Laboratory at A. E. Staley Manufacturing Company. Here new Textile Starches are processed, in miniature equipment, for use in laboratory tests.

After a new Textile Starch has been created in the Product Development Laboratory or Research Laboratory, it is processed in larger amounts in the Auxiliary Room and thoroughly tested in the Textile Laboratories. The perfected formula for this Starch is sent to the plant where it is then made up in larger amounts for actual mill tests.

Staley Laboratories work constantly to develop new products and improve present products to be of greater service to our customers.

Strict Control Laboratory supervision, throughout every step of processing, guarantees uniform quality and consistent, dependable performance of each and every shipment.

Staley's prompt service and complete cooperation is available to you. Write, wire or phone for detailed information.



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STALEY STARCHES

STALEY MANUFACTURING COMPANY

DECATUR, ILLINOIS

as so successfully exploited in self-service food shops, can be realized in the future merchandising of soft goods.

I have recounted a rather imposing list of background efforts designed to help you sell more goods. Which brings us smack up against the present pricing of cotton goods. Our cotton textile industry does not intend to go back ever to the conditions under which it existed in the 1930s.

When we sought the retail viewpoint just recently, we were reminded that a very popular print cloth construction which sold for seven cents in the gray in 1939 had just sold for 25 cents a yard. Raw cotton was five to 15 cents a pound over the 1930s and most of the time it was under ten cents a pound. Last October cotton sold at 38 cents and today it is in the low 30s, or 225 per cent more than six years ago. The prices of the 1930s wouldn't pay for the cotton content of that yard of print cloth today, without any manufacturing. Our government, with your money and my money, supports the high price level on cotton by non-recourse loans to growers. Our cotton farmers who suffered badly in the 1930s, do not intend to sell cotton to us at the prices of those days. That is the first reason why we do not think we are going to sell you cotton textiles at the prices we so sadly experienced in the 1930s.

Another reason we cannot go back to those prices is this—for years you heard about the low-paid, low-standard textile worker. He didn't need much skill. His living standards were not high. He could get along on little or nothing. He just about did that. In 1939 he got 36 cents an hour. His average weekly wage was \$13.78. Well, last September he got 89 cents an hour average and about \$36 a week. The national average is today practically \$1 an hour or nearly \$40 for a 40-hour week. And usually there is the opportunity to work 50 weeks.

In the 1930s cotton was cheap and labor was cheap but it didn't do the mills any good because our services, for reasons given, were on the auction block also. The record of net income of the cotton manufacturing industry year after year in the period from 1925 right up to 1939 was laughable. In the few years we made money, we did not make much. In that bitter struggle, only the fittest lived. Our prospect today is entirely different. The country is enjoying a generally good state of business. 58,000,000 employed people and only 2,000,000 unemployed—high payrolls—high public spending and while we hear a lot about consumer resistance to men's shirts, we do not hear it much on consumer durables priced at \$50 or \$100 per item above levels of not so long ago.

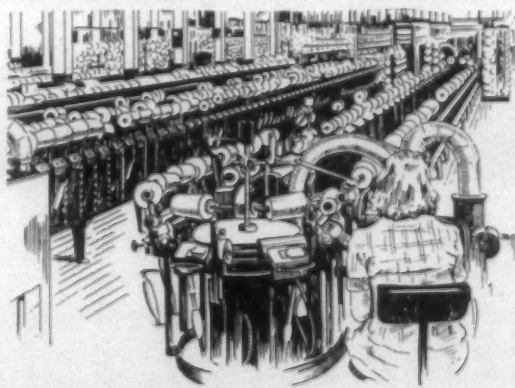
Between the two world wars, the textile industry in all its branches did not maintain its hold on a proper percentage of the consumer dollar. Our performance in recent years was much better according to figures released by the Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce. As indicative of the industry's progress, it may be noted that in 1939, 6.8 billion dollars was spent on clothing and related products out of total consumer goods expenditures of 73.3 billions. Proportionately the 1939 figures show 17.4 per cent of total consumer expenditures being attracted by clothing and related products as against 20.1 per cent for 1945. During the last five years we have educated the consumer to a fuller appreciation of the fun and luxury that goes with stepped-up soft goods buying. Our industry is aligning all of its forces to improve that last percentage and we will not be satisfied with only its maintenance.

We intend to continue to make great quantities of cotton goods. It is said that, directly or indirectly, the living of one out of every dozen persons in this country is somehow tied to cotton. We expect to pay good prices for cotton, even as we have been doing for a long time. We are an industry of many markets. Our products are in the thousands. We fall actually into about 50 major divisions of products, and while it is noteworthy that our production generally is the highest of any peacetime period, it remains that in many of these divisions it is at the moment less than in 1939 when this country had ten million less population. Our market thus is not one but many markets, and the same product may be salable into many outlets, industrial or consumer, home or export.

We have learned much in the war. Many mills remain suppliers of unfinished gray cloth and always must because there are many industrial uses for fabrics only in that state. Others have extended operations into finished goods. Much of the wartime integration will stay, particularly that on staples. And for the long run that will be good. The consumer over a period of time should benefit price-wise.

We like that phrase that we must and shall sell, and sell, because that is the only way we are going to move that quantity of merchandise. We shall sell goods for industrial uses, and they are nearly 40 per cent of our normal markets. We shall sell for apparel and that is another 35 per cent. We shall sell for home furnishings and the like, and that is 25 per cent or better. And we shall sell goods for export.

Once there was talk of satisfying immediate consumer needs, and then filling up the pipelines and the shelves. Today the talk is, buy for the short term; let the other fellow carry the stock. That may be good advice if you are talking about very long-term commitments. It may be less reliable if carried to extremes.



If you have an adequate inventory, then you can sell, and the customer's needs will be met. If you have no inventory, you will lose sales. If you lose sales, you lose business and we lose business. We cannot, any of us, just be order takers against goods to be produced at some definite time. We must show the goods, get them on the counter, display them, promote, advertise and move them into consumption.

Our industry is coming to its senses. For a change it has had the keen joy of making money. We are a basic industry. We supply basic necessities of life. We should get fair prices for the goods we sell. I think all of us agree to that. If we improve our product, if we flameproof or weatherproof or creaseproof or otherwise treat it or improve it, that is an additional cost (Continued on Page 68)

Visual Production Control In Textiles

By KELCY KERN

VISUAL control in business and industry made rapid strides during the war, when it was realized that paper records are largely history and that some up-to-the-minute information on all factors entering into an activity is vitally necessary.

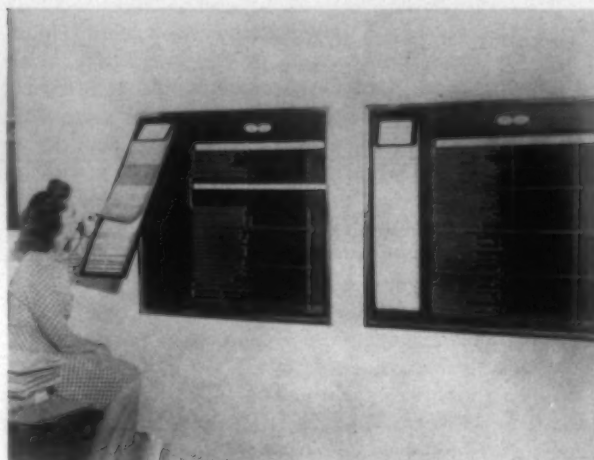
The result has been the development of visual methods of control already tested out and used in such mills as Pennsylvania Ribbon Mfg. Co., Continental Mills, Mojud Hosiery Co., and others. In the modern textile mill, executive departments and others can function with their greater smoothness and efficiency if those responsible can spot bottlenecks before they occur, or prevent their occurrence, and it is this that the modern system of visual production control is set up to accomplish.

The trouble with card index or paper file records in a production operation is that they are largely past history. They take up too much of management's time and tend to make for office confusion. It takes much clerical help to ferret out the records as wanted, and even then the precise situation under scrutiny by the management has to be worked out. On the other hand, it is said, that the visual method (board) takes only an hour a day to keep up, reveals shortages and situations before they stop production, and generally give an hour-to-hour picture of what is going on right down the aisle.

The visual control board used in these organizations is extremely simple, and can be operated by an intelligent routine office worker. The flexibility of the method will be easily realized from the description which follows. A visi-



Business records, on paper only, may be confusing.



One hour a day for a single clerk suffices.

ble index is located at the left side of the board. It is used to hold the permanent card records of the items or elements under control. There are 100 card pockets on each panel. A legend is located at the top of the board, and is used to show the meaning of the pegs and cords. A peg hole section is placed on the main body of the board for the purpose of visibly analyzing information on the cards by means of the pegs and cards. A heading strip is attached across the top of the peg hole section—to reveal quantity and/or time represented by peg holes from left to right. There is one tape peg for each item in the visible record panel, and each is numbered to correspond with the card pocket (at its left). Each peg is attached to a cord which pulls outward from the board so that it may be extended from left to right on the board as needed. The signal pegs are to be located, according to procedure, in the various peg holes, their meaning being noted on the legend at the top of the board. The "to-day" line is attached vertically to the board and is moved periodically from left to right in accordance with the time element in the procedure.

Thus, in making it possible to exert control in this kind of an operation, a visual method such as this offers certain very definite advantages. It provides, at a glance, a knowledge of all pertinent facts and figures, eliminates from the executives' attention situations which are in a normal condition, spotlighting the bad points and thereby reducing, immeasurably, the amount of time necessary to make an analyzed report.

It flashes the facts to all interested parties and at one time, is flexible and can be adapted quickly to any problem. It eliminates, according to the users, or greatly reduces the amount of time necessary for the accumulation of usable facts from routine, paper records.

In fact, it is a well known maxim that "in any kind of business operation, the greatest obstacles to efficiency are bottlenecks that appear from nowhere, and always develop

The latest and best scientific information on textile fibers

TEXTILE FIBERS

Their Physical, Microscopical
and Chemical Properties

By the late

J. MERRITT MATTHEWS
Fifth Edition

Edited by
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Monthly; In Charge of Evening Textile
Course, Columbia University; Textile
Consultant. With the assistance of 46
authorities.

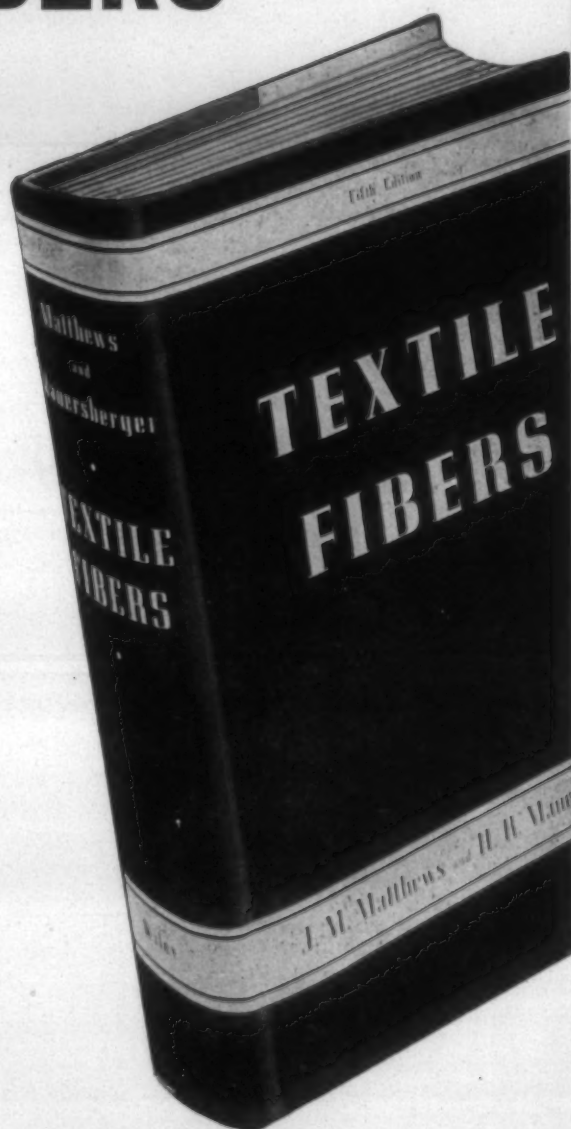
This standard book has been completely rewritten to give a modern, scientifically accurate discussion of textile fibers. Each fiber is dealt with separately, and the physical, microscopical, and chemical properties of each are cited. Among physical properties considered are the many mechanical, thermal, optical, and electrical characteristics which affect the utility of the fiber. Microscopical testing, identification, and qualitative analysis of textile materials are discussed in the light of recent advances in this field. The reactions of each fiber to organic and inorganic chemicals used in cleaning, mercerizing, decatizing, dyeing, etc., are presented in detail.

Contents: Introduction; Physical Properties of Fibers; Microscopic and Chemical Properties of Fibers; Cellulose—Sources, Constitution, and Chemical Properties; History, Growth, and Statistics of Cotton; Microscopical Characteristics of Cotton Fiber; Physical Properties of Cotton; Chemical Properties of Cotton; The Bast Fibers; Structural or Hard Vegetable Fibers; Miscellaneous Vegetable Fibers; Wool—History, Grades, and Statistics; Microscopical and Physical Properties of Wool; Chemical Nature and Properties of Wool; Specialty Hair Fibers; Textile Fur Fibers, Brush Fibers and Down; The Silk Fibers; Regenerated Rayon Fibers, Filaments, and Yarns; Acetate Rayon Fibers and Yarns; Synthetic Textile Fibers, Filaments, and Yarns; Mineral or Inorganic Fibers and Filaments; Fiber Identification Methods; Quantitative Fiber Analysis; Fiber-Testing Methods; Index.

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at the wrong time." However, it is also true that bottlenecks do not just casually happen—they are the slow, constant growth of weak production or operating control which reflects the need for improvement. Students of post-war business controls generally agree that, in view of these facts, the remedy at hand is to have a stronger link of production or operation functions with the central control that gives an up-to-date picture of your business—graphic presentation of past, present and future operations, singly, combined, and in proper sequence one to the other.

As users of such systems have pointed out, when production (or as the case may be, operation) is under accurate central control, there's far less waste of time and money—because men, resources and/or necessities are used to their fullest capacity and to save valuable man-hours, conserve vital executive time and are among the results of efficient production. Perhaps before the war, while these needfuls and their objectives were appreciated and even sought in industry, business and transportation through various methods, the post-war world is becoming constantly more visual-minded with the result that methods of operation in all

kinds of enterprises today are converging to the point of the graphic as in the instance described in this article.



Mill executive gets the production figure at a glance.

Separating In-And-Out Deliveries

By E. H. B. PALMER

THE greatest detriment to efficiency is to receive and dispatch goods over the *same* platform. The two operations should be segregated as far as possible. Neither should conveyors and elevators be employed for the dual purpose at one and the same time.

Theorists will disagree. They will tell you that it economizes, in space and effort, to make the maximum use of these methods. Sometimes theorists base their calculations on "one ball in the air!" Those of us with practical experience have discovered that such co-ordination invites the creation of bottlenecks.

Goods inward must pass straight through to where they will be stored, broken down, absorbed in a process or consumed. Goods outward have to be assembled in loads in the order of dispatch or specific route geography so that they progress to the loading platform without coming in contact with incoming supplies.

Even when two separate locations are set aside for in-and-out traffic, there will arise the sporadic efforts of some departments to dump any temporary or periodic overflow at the other, or second, location. The most common example of this concerns empties, to whom no ground is holy! If clear and separate delivery platforms are important, so are clear aisles—the traffic arteries.

Internal transport needs to be flexible because every operation is dependent on freedom of movements. Contrive, if possible, to install overhead conveyors to save floor space. This is needed for the passage of goods. If conveyor belts and other mechanized equipment are to be established on the floor level, first make sure they can be moved out of the way when not in use. Similarly, all mobile equipment such as trucks, skids, etc., should be parked in preappointed places, and returned there directly after use.

There must be space on the dispatch floor for the assembly of loads and to maneuver them towards the loading banks. Adherence to the policy will make it difficult for a last minute item to be dumped in a corner and discovered too late to be included. The complete assembly of a load depends on the fullest co-operation from virtually all departments, hence the necessity for amicable liaison. No department should be permitted to push its goods forward regardless of rotation or control. Bottlenecks arise in that way. The loading bank or platform is the last horizon, beyond which there may or may not be transport waiting to receive.

On the loading platform, each operation should be clearly defined. No one should be there who is not in the picture. The place for the driver is on the vehicle. As soon as goods pass over the tailboard, or through the truck doors, into the charge of the driver they come. It is then the driver's job to tally and stow the goods. Many harsh words between men and management have been said on a delivery platform. It is no place for any person of an excitable temperament. The efforts of as few as two men can be co-ordinated or confused according to direction and training. The impatient executive, who is unable to witness a clumsy effort without lending a hand, is making a poor situation worse. The physical result is problematical, while the psychological effect is nil. The net result is that he is neglecting his own job, which is to extract the last ounce out of his team to good purpose.

The executive who keeps a cool head and cultivates a sense of humor will find it possible to smooth out the daily wrinkles without breaking his own heart or that of anyone else. In conclusion, the simpler the delivery operation, the narrower will be the margin for error. The dispatch floor and the loading platform should be recognized as the last roller on the conveyor belt to the outside world.

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TAKE CARE OF YOUR TRAVERSES!

(Roto-Coner*)

The surface of the Rotary Traverse — due to meticulous care in manufacture — has a high degree of smoothness, which is necessary to the proper functioning of the device. It is important, therefore, to take all precautions to avoid nicking or scratching the surface.

On all machines, but particularly on those fitted with metal cone holders, every spindle should be checked to make sure that the cone holder spurs cannot come in contact with the Traverse. If they can and the cone holder is allowed to drop, the spurs may chip off the edge of a groove and cause faulty traversing. Any necessary adjustment can be made by means of the screw (A in Fig. 1) and check nut located in a lug on the upper edge of the frame cover, just under the cone holder arm.

The setting of this screw is carefully adjusted before leaving the factory, but should be checked in the mill. The correct setting is such

that, with no paper cone on the cone holder, the spurs do not quite touch the Traverse when the cone holder is dropped. The lug (B) on the bearing cap is so located that if the arm is dropped with the cone holder in the doffing position it will not fall on the Traverse.

As an extra precaution, it is always wise to replace a wound package, immediately, with an empty container.

Injury to the Traverse can also result from carelessness in cutting away drum wraps. Instead of cutting into the yarn towards the roll, the knife should be slipped under the yarn and the cut made away from the roll.

AUTOMATIC TENSION OPENER

(No. 99 Winding Machine)

When soft bobbins or broken ends are encountered on the No. 99 Automatic Bobbin Winding Machine — or should the spindle fail to operate after the bunch has been wound — the Tension Openers should be checked to make sure they are operating properly.

The function of the Tension Opener is to release the tension on the yarn, allowing it to run freely during the period when the wound bobbin is being doffed and the new bobbin placed in winding position. When the Spindle Head is withdrawn to release the full bobbin, a solenoid (A) operates a lever (B) to lift the discs; when the Spindle Head returns to grip the new bobbin and the Starting Lever sets the bobbin in motion, the solenoid releases the discs and tension is applied again.

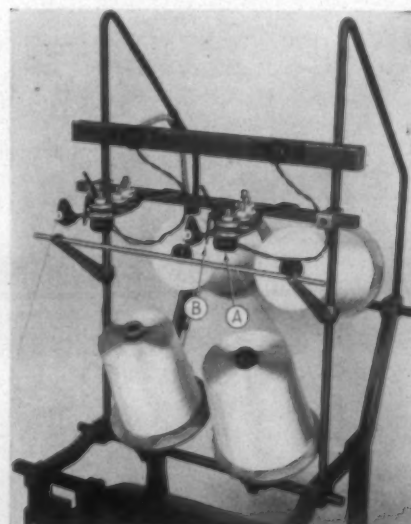


Fig. 2 No. 99 Automatic Tension Opener, showing solenoid (A) and opener (B).

The small bronze button on the lever should be in line with the plunger of the solenoid so that they will contact when the solenoid operates. If the button is too far from the plunger to be affected by the pull of the solenoid, the adjusting screw in the lever can be turned down to close the gap slightly, and the check nut tightened. If the button is too close, and the discs are not lifted enough, the lever can be bent upward slightly to correct the adjustment.

*Reg. U. S. Pat. Off. March, 1947

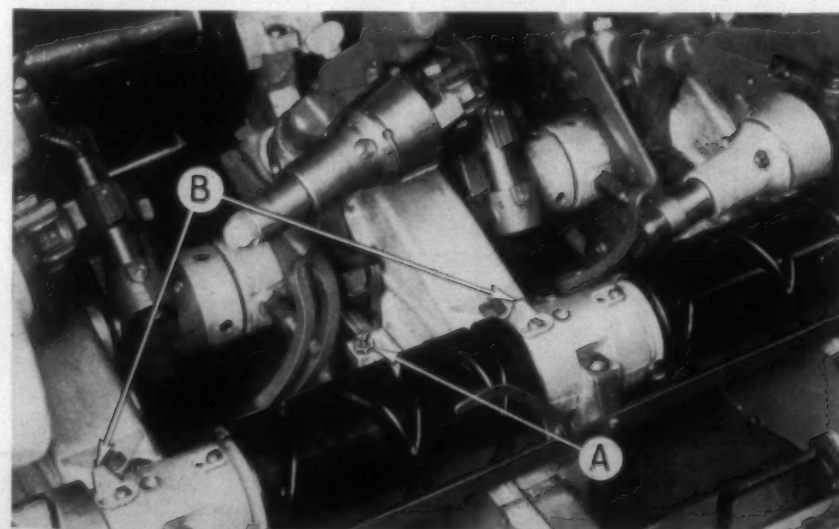


Fig. 1. Screw A permits adjustment of the limit to which Cone Holder can drop. Lugs B check fall.

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TEXTILE BULLETIN • April 15, 1947

New Device Measures Yardage On Warp Bobbins

A MULTIPLE bobbin gauge for measuring the yardage on warp bobbins has been designed and built by J. A. King of Greensboro, N. C. The purpose of this machine is to enable mills engaged in the manufacture of rayon, silk and combination yarn cloths to determine accurately whether or not there is sufficient yardage on the bobbin to prevent a run-out when it is to be used as warp yarn, and to accomplish this with the least amount of manpower hours, and with more accuracy.

The multiple bobbin gauge is designed so as to permit the operator to detect which bobbins have an insufficient amount of yarn without the necessity of removing the bobbins individually from the board. This method also provides for the gauging to be done by weight, which has been found to be far more accurate than by forking or measuring.

The operation of this multiple bobbin gauge is very simple and rapid, as the operator merely places the loaded board on what is termed the "board table" and presses a button which immediately puts all of the bobbins in a weighing position, which means that they are raised to the top of the pin on the board to eliminate the maximum amount of friction caused by the pin rubbing against the

inside of the bobbin. The operator can distinguish immediately which bobbins will run the desired yardage in the warper creel and which ones will not due to insufficient yardage, by looking at the control board directly in front of the bobbins. For each bobbin on the board, there are two lights on the control panel, one green and one red. If the bobbin is short, indicating there is insufficient yardage on the bobbin, only the red light burns. If the bobbin has more than a sufficient amount of thread on it, only the green light will burn, the latter case indicating that the bobbins are ready to be transferred to the warper and would have sufficient yardage on each to prevent a run-out, and the former case, or when only the red light burns, it is indicated that the bobbin should be sent to the re-drawing department or direct to the copying department for filling.

To guide the operator, each set of lights on the control panel is numbered and a corresponding number is given the bobbin in the same position on the board so that the operator can easily distinguish which bobbins have a sufficient amount or insufficient amount of yarn. As soon as this operation is completed and the underweight bobbins removed from the board and replaced with full ones, the operator then presses another button and immediately the board table is raised, thus placing each bobbin on its original pin. The self-stacking board is then ready for removal.

This gauge can be adapted to boards of various multiples of bobbins, also can be adjusted for bobbins of different amounts of yarn. The advantages of this multiple bobbin gauge are that it prevents run-outs. The old system did not do this, as there were usually from 50 to 150 run-outs to a warp, meaning that there would be that many stops to splice in the run-out, and that many knots would appear in the cloth as well as slack ends due to the warper stopping, in addition to the time lost to make the correction. This gauge also saves (estimated) from 30 to 50 per cent of the re-drawing as compared with the old method of gauging by the fork. It is so rapid that a good operator can gauge in excess of 1,200 bobbins per hour, which is approximately one-third of the time formerly consumed in the gauging of bobbins, one at a time, by weight or the fork method, or a saving of two-thirds of the time formerly needed. Not only is this system said to be more accurate than the former methods used, it is much faster, easier on the operator, and prevents the bruising of the yarn. This method also provides a means of getting the maximum warped yards per spool.

Oscar Johnston, president of the National Cotton Council, announced recently that the council's board of directors will hold its spring quarterly meeting at the Hotel Peabody in Memphis, Tenn., May 9, instead of Greenville, Miss., as previously scheduled. Change in meeting sites was made by Mr. Johnston following official word from the White House that President Truman would be unable to address the annual meeting of the Delta Council at Cleveland, Miss., May 8, due to gravity of the international situation. Cotton Council board members were to have been special guests of the Delta Council at the meeting.



Shown above is the multiple bobbin gauge, designed and built by J. A. King of Greensboro, N. C., which determines the amount of yarn on a single bobbin by weighing a number of packages at the same time.

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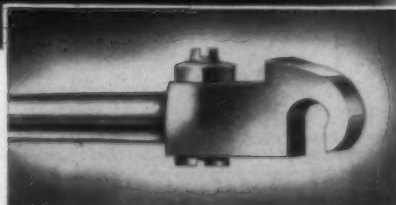
for Shuttle-changing or Box Looms



New!

LEVELING DEVICE

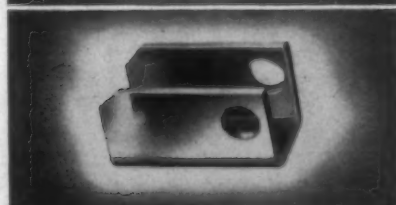
Spindle head, completely redesigned and constructed, permits accurate alignment by turning leveling screw with slot provided in shank. Lock nut maintains setting. Eliminates any need for bending spindle by hand with possibility of breakage or damage to top spring. Slot head design makes spindle change easy.



New!

METAL HEAD BOX

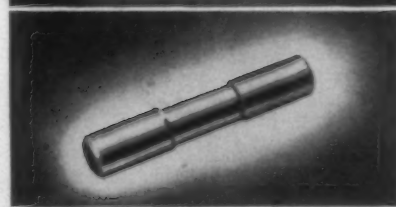
Heavy steel box holds spindle head rigidly in place, prevents side play. Provides solid base for leveling screw. No part of spindle head contacts wood. Assures lasting, positive alignment.



New!

SPINDLE HEAD PIN

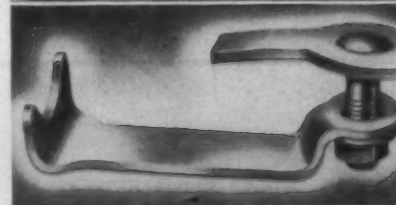
Double shouldered steel pin, shaped so it can't work out through front or back wall of shuttle. Avoids danger of reed spoilage or "smashes" from "break outs". A patented feature!



New!

INTERCHANGEABLE CATCH

Shuttle can be assembled with either long catch, to fit a wooden bobbin, or short one for paper tube. Parts interchangeable. Operation requires less than two minutes. Provides positive fit.



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New Laboratory Completed By United Elastic Corp.

UNITED Elastic Corp., with plants at Lowell, Littleton and Easthampton, Mass., as well as New Haven, Conn., Stuart, Va., and Montgomery, Ala., has completed a new and modern research and development laboratory at its Easthampton headquarters. The laboratory is under the direction of S. Clark Lilley.

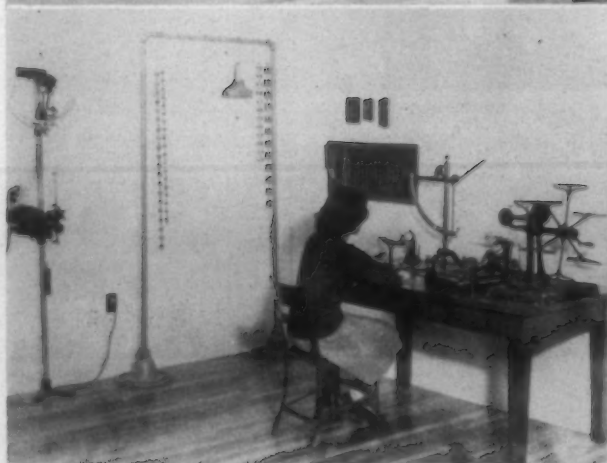
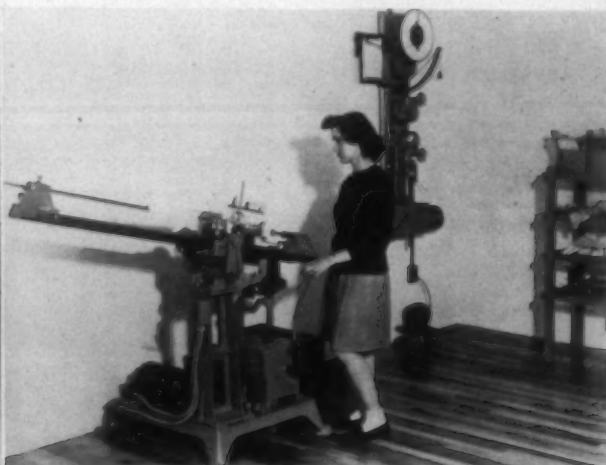
Atmosphere in the laboratory is maintained at standard conditions of temperature and humidity. The most recent scientific apparatus is installed for testing and evaluation of elastic woven fabrics and braids as well as the components that go into their manufacture—such as rubber thread and various yarns. The new facilities are centrally located in regard to the other principal plants of the firm, and are dedicated to (1) unifying the high standard of webbing manufactured by the company; (2) helping customers who are manufacturers of garments or articles using woven elastic webbing or braid; and (3) seeing to it that United's



S. Clark Lilley

various mills maintain quality by continually checking on production.

The laboratory has been made available for use by the company's customers, or any potential users of elastic fabrics, in the development and improvement of existing lines to increase serviceability and sales appeal.



Scenes from the new laboratory of United Elastic Corp. at Easthampton, Mass.

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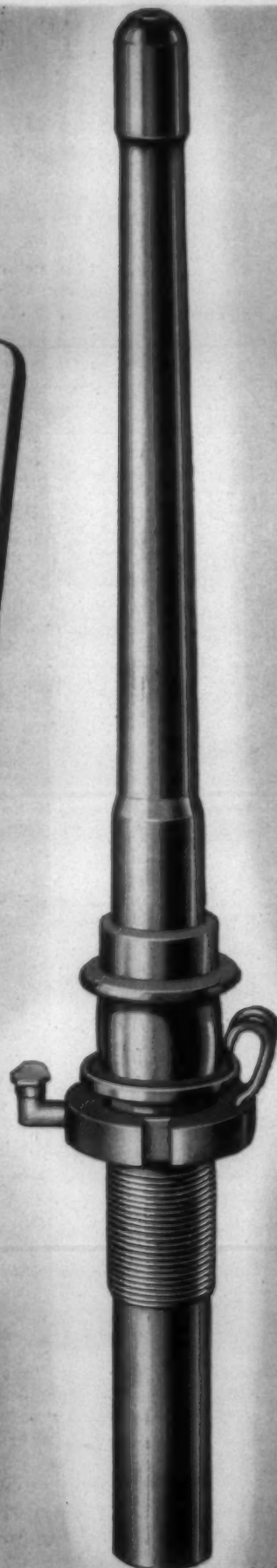
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Carl Brandt Addresses Gaston County S. T. A.

CARL BRANDT of Whitinsville, Mass., head of the Whitin Machine Works fiber development and research department, delivered an address on "Laboratory Equipment and Its Value to the Average Mill" before the spring meeting of the Southern Textile Association's Gaston County Division April 4 at Gastonia, N. C.

In textile testing, the speaker asserted, the end point—what you are aiming for—always must be kept in mind. "In dealing with a boll of cotton you want to know the grade, which is judged from appearance; length, usually judged by an individual employing past experience; strength, determined by specialized machines; and cleanliness, which must be judged by eye."

As to length, Mr. Brandt said, crude testing in the mill can determine how to set the rolls on a spinning frame, but there are machines for the job. "The sorter will do an accurate job for you, and the Fibergraph does it automatically." The Europeans, he stated, have a number of fiber strength testing machines, but none of them are very practical because too many breaks are required. He paid tribute to the Saco-Lowell sliver tester as "a very worthwhile instrument, one of the most valuable a mill can use."

"A mill's drawing," the speaker asserted, "should not be neglected. Most mills are short on drawing, don't pay enough attention to their drawing units, and run them too slow." In combing, he stated, be sure the fiber is straight and the lap even. "Good combing begins at the cards, and remember that the comber was not intended to card." A good sliver with minimum variation will result from using

long cotton and employing a light lap. "Make a nep count of your lap, using a ten-grain quantity for reliability. If you have more than one-third nep count, your operations are faulty."

In roving, according to Mr. Brandt, quality can be checked by the "roving tester," but the true test comes from mill application. "The roving tester has encouraged mills to put less twist in roving, but consistency of operations is your chief goal." One-process roving, he stated, has to have a good sliver to be successful.

The skein break tester is a standard instrument in most spinning plants, he said, but the sample is too long and there is too much chance for irregularity. "The single-strand breakage is preferable."

Summing up his remarks, Mr. Brandt stated that "Your test records contain many figures which can be useful. You can determine what operating conditions were for a certain period of good running, then set reasonable limits, say one through 20, where out of 20 units 19 should fall within your limits."

John M. Caughman, general superintendent of Spartan Mills at Spartanburg, S. C., and current S. T. A. president, was present for the Gaston County Division's meeting. He spoke briefly on the association's work, and urged all members to attend the organization's annual convention at Mayview Manor, Blowing Rock, N. C., June 19-21. Marshall H. Rhyne, general manager of Lola Mills, Inc., at Stanley, N. C., presided during the meeting in his capacity of divisional chairman.

Alabama Association Considers Economics

MEMBERS of the Alabama Cotton Manufacturers Association gathered in Biloxi, Miss., April 14-15 for their annual meeting and elected Claude M. Elrod of Boaz Mills, president of the association to succeed Homer M. Carter. The new president officiated at the two-day event in the absence of Mr. Carter, manager of the Pepperell Mfg. Co. unit at Opelika, who was unable to attend due to illness. A number of prominent speakers were heard and problems facing the industry today, and likely to appear in the future, were discussed.

Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, warned that present efforts to break the price structure could lead to economic disaster if manufacturers do not maintain a clear perspective. "There is much loose and irresponsible talk about the necessity for price reductions," he declared. "If reports from Washington are to be believed, there is the threat of hasty action on the part of the government. Both of these developments are more serious than the fact of higher prices. If prices are broken down by crowbar methods, the results will be disastrous." Dr. Murchison declared that prices should decline as a result of normal processes. "I am not saying the price structure is here to stay or that it should stay. We are the envy of the world which needs our products, and yet in America

people are so short-sighted, trying to break down that structure. Of course prices will go down, but they should go down as a result of normal processes, because of supply being balanced with demand. Under such procedure, the adjustment will be gradual, without creating a national panic—and that would mean an increase in purchasing power of wages." He stated that critics of the present price structure should refer to their text books and refresh themselves on the function of prices, which is to balance supply and demand. Price is the most valuable device in economics, he added, provided there is free competition.

Mr. Elrod called for U. S. cotton mills to do their share in watching their production to see that it does not overrun demand. "Keep inventories low," he urged. "Maintain a reasonable price with a reasonable profit and hold the progress we have made in the last few years." A high priced inventory, he warned, never makes a profit. The new president of the Alabama group stated that industrial production is being maintained at approximately ten per cent over that of a year ago, while the physical volume of goods sold is beginning to taper off.

Senator John Sparkman, Democrat of Alabama, expressed the opinion that the United States, with the tremendous obligation of world leadership thrust upon it, must foster

expansion of world trade by the reduction of barriers to the free flow of goods between nations, not only to bring about world stability and peace but also to promote industrial prosperity here at home. He called for full support to the foreign policy set by President Truman in aiding Greece and Turkey as bulwarks against the spread of Russian influence in that area.

Among the other speakers heard were Dr. Burt Johnson of the Institute of Textile Technology, Charlottesville, Va., who spoke on "Future Steps in Stream Sanitation," and Dr. Robert J. Taylor of the Southern Research Institute at Birmingham, Ala., who discussed "Fire Resistant Bedding."

Members of the association, without a dissenting vote, decided to increase the dues from the basis of a half-cent a spindle to one cent a spindle. This move was taken because the association needs more money to carry out its program, plus the fact that the past year's operations had been at a deficit.

In addition to Mr. Elrod, other new officers elected at the meeting are B. G. Stumberg of the Mt. Vernon-Woodberry Mills unit at Tallassee, who was treasurer, vice-president; Dwight Wilhelm, secretary of the association, was chosen to fill the newly-created position of executive vice-president; and Paul Redmond, Jr., of Alabama Mills, Birmingham, was named treasurer. Homer M. Carter, the retiring president of the association, was elected chairman of the board of directors. Three vacancies on the board, to fill the three-year terms completed by Thomas D. Russell of Russell Mfg. Co., Alexander City, P. W. Peeler of Lincoln Mills, Huntsville, and Paul Clark of Standard-Coosa-Thatcher Co., Gadsden, were filled by election of A. D. Elliott of Huntsville Mfg. Co., T. P. Roberts of Adelaide Mills, Anniston, and I. F. Blue of Cowikee Mills, Inc., Union Springs. Ronald Forrest of California Cotton Mills Co., Uniontown, was elected to the board to fill the unexpired term of Mr. Redmond, the new treasurer.

TERYLENE—The New Synthetic Fiber

By K. TURNER, in the English periodical, TEXTILE RECORDER

CONSIDERABLE interest has been aroused by the recent announcement of Imperial Chemical Industries, Ltd., and the Calico Printers Association, Ltd., of the discovery of a new synthetic textile fiber which goes by the name of Terylene. At this early stage of its development the properties and behavior of Terylene can only be mentioned in rather general terms, but enough is already known about them to indicate that this new fiber is destined to play an important part in the textile field.

Until the commencement of the present century the many and varied textile requirements of the world had perforce to be met by the utilization of the naturally occurring fibers. The range of fabrics that can be produced from them is large and it may well be asked why it should be necessary to add yet more fibers to the already imposing list. The answer is that while man can use his technical skill to convert these natural fibers into fabrics which will possess some of the desired properties of strength, warmth, softness, durability, etc., according to the particular purposes for which they are intended, he can do but little to change the intrinsic properties of the fibers themselves. It is understandable, therefore, that he should try to overcome this limitation by manufacturing fibers with properties more nearly approximating to his specialized requirements.

The production of rayon some 50 years ago marked the first step in the business of making fibers to measure. But although the rayon manufacturing processes permit considerable control over the physical dimensions of the fibers, they are still dependent on nature for the supply of the cotton linters and wood-pulp which provide the cellulosic starting material. Only by the synthesis of suitable starting materials could complete control be hoped for over the nature and properties of the resulting fiber.

The successful accomplishment of such a synthesis was first announced in 1938 when America informed the world of the discovery of nylon. That this new fiber was no mere chemical curiosity has been amply shown by the invaluable part which it played during the recent world war when the

shortage of natural silk supplies would otherwise have proved a serious embarrassment. The combination of adipic acid and hexamethylene diamine, both of which can be manufactured in chemical plant from simpler substances, to form a superpolyamide which could be converted into the long continuous filaments of nylon with its now well-known and outstanding textile properties, opened up a new and encouraging field of research which was immediately explored. Many other superpolyamides have been made by combining different acids and diamines and it was logical to study the production of superpolyesters from the interaction of selected straight-chain acids and alcohols. These superpolyesters, however, although potentially fiber-forming substances, were not generally suitable because they melted at too low a temperature and were too easily broken down by the action of alkalis.

In 1941 the C. P. A. commenced an investigation of the polyesters and J. R. Whinfield, who was directing the research, decided to examine the effect of substituting for the straight-chain aliphatic acid an acid of the aromatic series, that is, one in which the benzene nucleus is present in the molecule. It soon became clear that this change brought about a great improvement in the cohesion between the long chain-like molecules of the polyester and the melting point was substantially raised. Dr. J. T. Dickson, also of C. P. A., observed that terephthalic acid when condensed with ethylene glycol gave a suitably high-melting superpolymer which could be spun and drawn into a strong fiber which, unlike the earlier efforts, was quite resistant to hydrolytic attack.

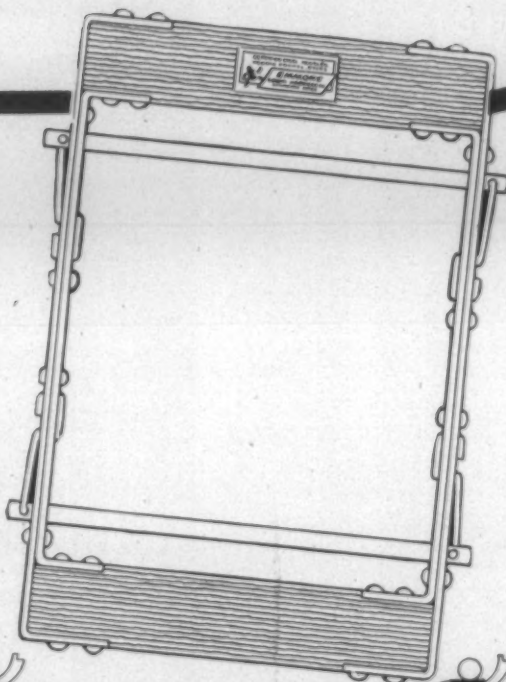
This new polymer, polyethylene terephthalate, was selected as the most promising of the superpolymers for more intensive study and the Department of Scientific and Industrial Research gave its assistance and confirmed the early indications that it was worthy of further development. It is, however, a very large step from the production of a small laboratory specimen to the successful manufacture of fibers on a commercial scale. Such development requires large resources and a wide background of scientific and

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technical skill of the type available in the dyestuffs and plastics divisions of Imperial Chemical Industries, Ltd. This company was invited to carry out the heavy task of bridging the gap between the laboratory and commercial production.

Of the two intermediate products required for the synthesis of the Terylene polymer, ethylene glycol was already manufactured for other purposes in large quantities, although not to the requisite very high standard of purity, while terephthalic acid was rather an unknown quantity. Suitable methods for manufacturing terephthalic acid in bulk had to be devised and the difficult problems of purifying the product and the glycol had to be surmounted. At the same time the correct conditions for condensing the two intermediates together to yield a polymer with the correct properties had to be established. These involved the employment of high temperatures and high vacuum with the rigorous exclusion of air. These many processes are still being examined always with the object of improving the quality of the polymer and ensuring that full-scale plant operation is a practical and economic possibility.

The conversion of the polymer into the fiber form provided a further series of problems. Novel and elaborate methods were devised to maintain the molten polymer at precisely the right temperature and to insure that the extruded filaments were regular and uniform, and could be collected in the right form for subsequent operations. Much work still remains to be done and many problems have yet to be solved before Terylene can be made available to the public.

In considering Terylene as a textile fiber it is still too early to give exact figures for such properties as strength and extensibility. As with nylon, the filaments of Terylene when first spun are weak and highly extensible, and it is not until they have been drawn out to several times their original length that the long chain molecules of which they are composed are brought into the orderly arrangement on which their strength depends. The extent to which the filaments are stretched can be varied within fairly wide limits and so it is possible to produce either very strong yarns with relatively low extensibilities or somewhat weaker yarns with correspondingly increased extensions at break.



The girl above is wearing ski trousers made from a new waterproof woolen fabric developed in England. The cloth is one of the novelties to be shown in the textile section of the British Industries Fair, to reopen May 5 simultaneously in London and Birmingham after an eight-year lapse. This self-sealing cloth keeps the body warm, but will not shut out air as does chemically waterproofed material.

The problems of selection and standardizing of these tensile properties which are best suited to the various textile purposes where it is believed Terylene will find its uses are being carefully studied.

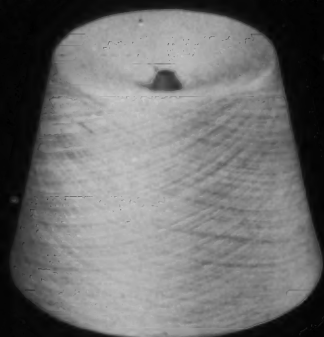
The stress-strain relationships of Terylene differ quite appreciably from those for nylon and the rayons. In particular Terylene possesses a high initial modulus of elasticity, that is, a relatively high load must be applied to produce a small extension. At the same time the length recovery of the yarn, especially from low extensions, is very high and takes place rapidly so that it behaves rather like a heavy spring. These properties should permit Terylene yarn to be readily woven and knitted and, indeed, such trials as have already been possible give confirmation of this view.

Terylene suffers very little loss of strength on wetting. This is a very desirable property since it means that fabrics should withstand wet finishing treatments and laundering without the danger of breakdown. The ordinary dry cleaning solvents are without effect on Terylene and its resistance to bleaching agents is good. Dilute mineral acids even at boiling temperatures have negligible effect on Terylene and it may be left in contact with moderately strong mineral acids at room temperature for long periods without seriously affecting the tensile strength. Although Terylene is more readily attacked by alkalis, its resistance is nevertheless of a satisfactorily high order.

Terylene can be heated to temperatures approaching 200° C. without suffering appreciable discoloration or degradation and fabrics made from it can be ironed with safety. It is, however, necessary to "set" Terylene by a suitable heat treatment to make it dimensionally stable to subsequent heating. If the unset yarn is immersed in boiling water or subjected to dry heat it will contract in length unless it is restrained; but if the yarn is held so that it cannot shrink the heating treatment has a stabilizing effect and it can then be heated up to temperatures near to the setting temperature without undergoing appreciable length changes. It is, therefore, possible to knit hose from unset Terylene yarn and then by placing it on a suitably shaped former and heating it for a short period at a suitably high temperature the hose will retain its shape through subsequent wet processing and pressing treatments. The moisture absorption of Terylene at 65 per cent relative humidity is less than one per cent and, as might be expected, there is practically no swelling of the fiber when it is immersed in water. Largely for this reason the dyeing of Terylene is presenting difficulties but these are being energetically tackled at the present time.

Terylene possesses excellent resistance to attack by molds and bacteria and is remarkably stable to the action of light. The combination of these properties together with its low moisture absorption would suggest that Terylene should be very satisfactory for the production of strong and durable tentage fabrics for tropical climates. Experience during the recent war has shown that the losses of ordinary cellulosic fabrics under hot, moist conditions that favor rapid attack by micro-organisms both in use and during storage can be extremely serious. The losses can be reduced by suitable proofings but there are obvious advantages in a fabric which is intrinsically resistant to microbiological and atmospheric attack. Terylene can be produced either in the form of a multi-filament yarn or as a monofilament. In the latter form outlets can be foreseen in the manufacture of chemically resistant screening and filtering media and for mosquito and similar nettings.

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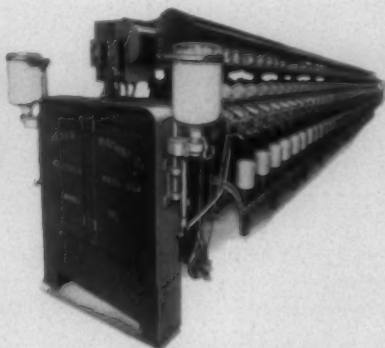
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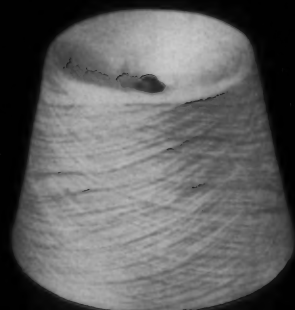
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Federal Flammability Bills Hanging Fire

THE opinion has been expressed in Washington that legislation proposed in Congress to rigidly define the flammability of textile products, now before the House Interstate Commerce Committee, would never be reported out and that the bills are dead for this session. In the Senate there is a similar situation concerning the Capehart Bill, which is identical with the Arnold Bill, one of the three bills before the House Interstate Commerce Committee.

Rep. Carl Hinshaw (R., Cal.), second ranking Republican member of the committee, states that the committee has decided it will take no action on flammability legislation until after the Bureau of Standards has completed action on a voluntary commercial standard for flammable fabrics. A revised version of the recommended standard was mailed to the trade by the Bureau of Standards March 12, and since from this point it may take from six months to two years to get sufficient acceptances to put the standard into effect, the possibility of legislation at this session seems remote.

The action of the committee is regarded as a victory for the viewpoint presented at the hearings by the National Cotton Council, the Cotton-Textile Institute, the American Cotton Manufacturers Association and other textile trade associations, which requested the action which the committee has taken. At the same time, it is a setback for the retail viewpoint as represented by the American Retail Federation, the National Retail Dry Goods Association and others.

Representatives of the cotton interests maintained that the legislation would rule out of interstate commerce shipments fabrics representing nearly a million bales of cotton and charged that retailers were trying to unburden themselves of their responsibility to their customers in connection with the sale of flammable fabrics and to shift this burden to the mill and manufacturer.

Dr. William P. Jacobs, president of the American Cotton Manufacturers Association, said the legislation as it now stands goes beyond any reasonable requirements and would seriously penalize cotton production. He pointed out that some cotton production can be made flame resistant and some cannot and that an effort to make everything non-flammable would greatly limit the number of products the public can use. "I believe Congress will look into this proposed legislation carefully before it passes it," Dr. Jacobs declared.

The Arnold Bill, which is sponsored by the National Retail Dry Goods Association, is based on the commercial standard development by the American Association of Textile Chemists and Colorists for testing flammability of apparel fabrics. Dr. Herman E. Hager of General Dyestuff Corp., chairman of the A. A. T. C. C. flammability committee, expressed the opinion before a recent meeting of the Rhode Island Section of the A. A. T. C. C., that passage

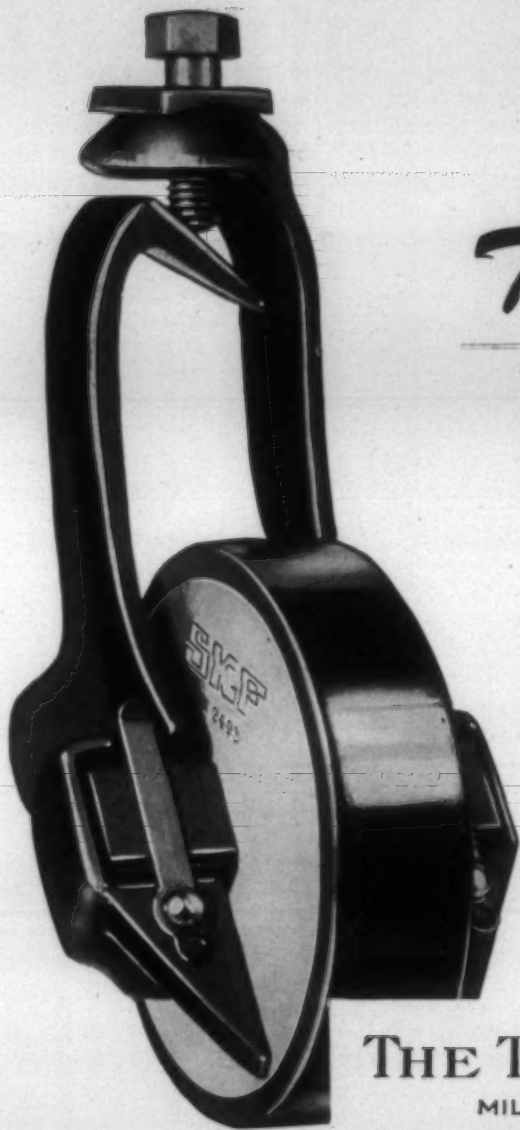
of the Arnold Bill would not mean hardship to the industry. "In the first place," he said, "only a very small percentage, probably not more than one or two per cent of all textiles will be found vulnerable according to our test and these few can be continued to be manufactured as they can now be made flame-resistant without losing their character." Dr. Hager stated that the National Bureau of Standards has adopted as a commercial standard the A. A. T. C. C. method and machine for testing flammability of apparel fabrics, and that the A. S. T. M. also had expressed a desire to adopt this method. Recently the machine was adopted by the Fire Marshal of California for use as a standard in that state. Fifty-four of the machines have been purchased by textile mills, testing laboratories and others.

Dr. Claudius T. Murchison, president of the Cotton-Textile Institute, Inc., pointed out at the hearings in Washington that a uniform standard applied to a fabric is meaningless in the light of the different ways and circumstances under which the fabric is worn. He declared that it is clear that the time has not yet been reached when the problem of fabric flammability can be solved by the legislative approach, adding that continuation of research and education is essential and to this problem the industry is committed.

Dr. Murchison charged that, in the majority of instances, the final specifications of a fabric are determined by the retailer. Many great retail organizations, he said, pride themselves on their efforts to control the specifications of the merchandise they sell. The retailer's influence is becoming more important daily in fabric merchandising, he said, and yet the word "retailer" does not appear anywhere in any of the proposed bills, he pointed out.

John L. Severance, secretary of the Association of Cotton Textile Merchants of New York, also stated that it is the retailer who sets fabric specifications. "None of us can sell anything that the retailers will not buy," he said. G. C. Whalen of Joshua Bailly & Co. emphasized this point, declaring that "retailers are not engaged in distribution for charity."

Henry C. Ball, executive director of the Tufted Textile Manufacturers Association, said that although members of his association manufactured nearly six million units of chenille robes annually, he had been able to locate only three individuals who had suffered burns while wearing such garments. He declared that although the Department of Commerce tests of 11 chenille swatches found only three that would pass the test, the United States Testing Co., using the same tests and the same machine, had passed ten of the 11 samples. He added that his members had not yet been able to find a flameproofing for tufted material which would leave it in a saleable condition. Some processes made it impossible to dye the fabric after it was applied, he said, while others made it impossible to thread



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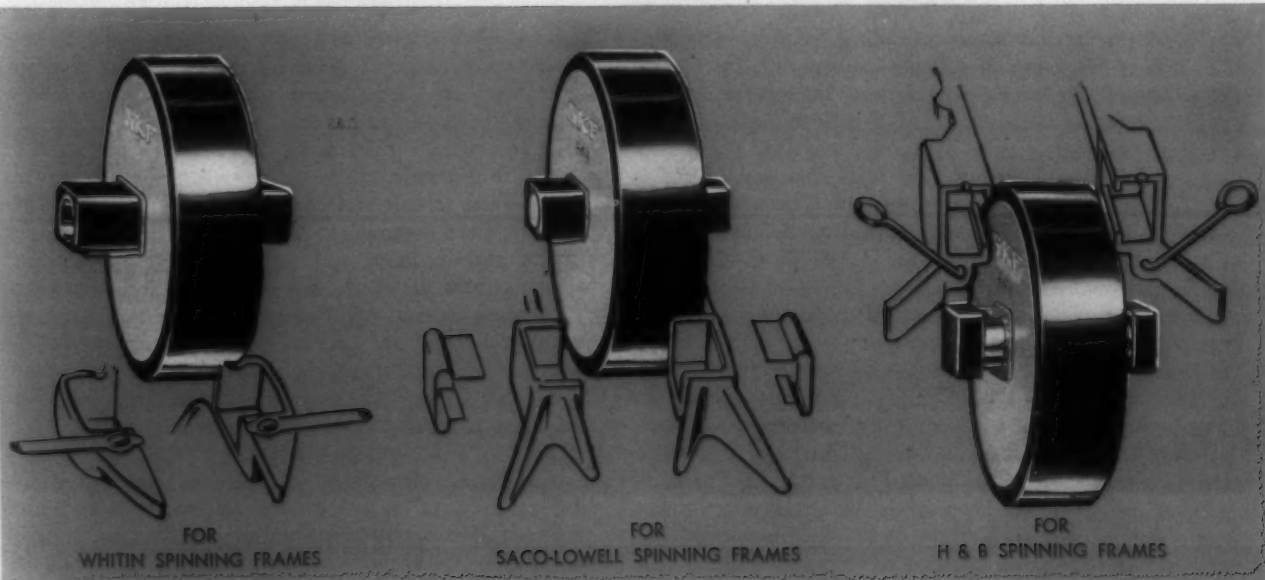
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yarn through the needles of the tufting machines, and others dulled and destroyed the steel in the cutting knives.

Dr. David R. Craig, director of research of the American Retail Federation, spoke in rebuttal to some of the opposition arguments of cotton industry groups. While not expressing open support of any one of the three pending bills, Dr. Craig charged that the proposal that legislation be delayed until an adequate standard is developed for determining border line cases of flammability, is "not an impressive argument." He explained that the A. R. F. and various committees of retailing have been working on standards for a long time and that "anyone who objects to standards carries on his shoulders the burden of offering a better one."

The recommended commercial standard TS-4350, based on the results of research by the A. A. T. C. C. and N. R. D. G. A., requires that a textile fabric or product in its original state, two by six inches, after being dry cleaned and washed as specified when tested may ignite but the flame shall not burn the cord in less than six seconds based on the average of five or ten specimens, depending on whether retest is made, to be considered not dangerously flammable. If lower, the fabric shall be considered dangerous and unsafe when worn by persons. In no instance shall an individual specimen have a flammability rate of less than five seconds.

Dr. Murchison, however, stated that "the determination of standards is as yet in the purely experimental stage. There has been no general acceptance of criteria even of the most elementary type. For example, we do not yet know whether a fabric should be tested in a horizontal state or at an angle of 45 degrees, or in a vertical position. We do not yet know whether the heat should be applied through a tiny ignition point or in a broad flame. We do not yet know whether the measurements should be made from the

point of ignition or from a thread which the flame reaches in a running start. All of these are deficiencies which are readily apparent as a matter of principle. In actual experience they are still further magnified. Differences in the nature of presumably similar fabrics are so great that under actual tests fabrics which appear to be exactly alike and which have the same finish and the same moisture content and are tested in the same machine under the same procedure of ignition give results which vary by as much as 300 per cent in the measurements."

Dr. Murchison added that industry is anxious to make every reasonable effort to minimize fire hazards in fabrics. "We have already committed ourselves to a program of technical study and education to accomplish this," he said. "We feel that legislation, whether Federal or state, is distinctly premature at this time because effective techniques, both from the standpoint of methods of enforcement and of scientific standards, have not been developed. There would be involved a tremendous government expense together with extremely burdensome and complicated restrictions upon the operations of a great industry without an assurance that the objectives would be reached."

Roy A. Cheney, president of the Underwear Institute, New York, advanced the suggestions that any legislation passed by Congress should clearly fix the point of responsibility for violations; that such legislation should be so devised as to prevent the rise of a black market in flammable fabrics, and that stringent provisions should be incorporated to keep the "sharpshooters from getting under the wire." In a formal statement before the house body, Mr. Cheney charged that the Arnold-N. R. D. G. A. bill was too involved. He favored passage of a simple bill, along the lines of HR-505 (Canfield Bill), containing the suggested changes.

A.A.T.C.C. Group Discusses Flammability Of Cotton

THE flammability of wearing apparel, flameproofing treatments, and the testing of textiles for fire resistance were discussed at a meeting of the Rhode Island Section of the American Association of Textile Chemists and Colorists held recently at Providence. Leading the discussion were Dr. Robert W. Little of Ellicott Laboratories, Inc.; James R. Redmond, Textile Colors Division, Interchemical Corp., and chairman of the A. A. T. C. C. Committee on Testing of Fire Resistant Textile Materials; and Dr. Herman E. Hager of General Dyestuff Corp. and chairman of the A. A. T. C. C. Committee on Testing of Consumer Textiles for Fire Resistance. C. A. Baker of United States Testing Co. demonstrated the use of the A. A. T. C. C. testing equipment and method.

After discussing the theories of flameproofing, Dr. Little described the various systems for producing flame-resistant fabrics. "Until 1940 or 1941, the majority of the flame-resistant treatments available in this country were of the water-soluble or transient type. All of the temporary flameproofing treatments are destroyed by bleaching or laundering. They are therefore applied with the intention of periodic reapplication in order to maintain effectiveness. Even more serious than their solubility, however, is their tendency to lose effectiveness upon exposure to high tem-

peratures and humidities or, in some cases, even on prolonged exposure at ambient temperatures.

"Permanent flameproofing treatments can be divided into two broad classifications, those in which the active retardant is added to the unmodified fiber and those which depend for flameproofness and durability on a chemical modification of the fiber itself. Probably the most common formulation of the first type has been a combination of metallic oxide and suitable chlorinated material. The add-ons required are generally 15 to 20 per cent higher than in the case of water soluble retardants. Depending upon the type of fabric, there is sometimes an undesirable influence upon physical characteristics, such as hand or color. Counterbalancing these drawbacks are several striking advantages. The treated fabrics, when properly impregnated, possess the greatest degree of permanence of any of the durable flameproofing processes, being equally resistant to drycleaning and laundering with neutral or alkaline detergents. The application of the flameproof or flame-resistant finish leaves the fiber with its tensile strength unaffected, or in most cases, materially improved. Similarly, the loading of the fabric by virtue of the add-on required, can often be turned to advantage in the improvement of underweight or sleazy fabrics. Finally, by proper compounding, it is possible to

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include in the one operation, additional processes such as pigmenting, mildewproofing and the application of crisp finishes or permanent sizes."

Speaking on the subject of testing for fire resistance, Mr. Redmond stated that he considers the following factors form a sound basis for a test method: (1) the test must provide a means of determining whether a fabric will support combustion under certain conditions; (2) the test must provide a means of comparing the fire resistance efficiencies of various fabrics and finishes; (3) the test must be a reasonably severe one and hence a safer test in the long run; (4) the test must be sufficiently standardized to yield results which may be duplicated in all laboratories; (5) if possible, the test should involve apparatus which is both simple and economical to construct and operate; and (6) the test might be more valuable if it duplicates under measurable conditions the test most likely to be used by mills, converters, wholesalers, retailers and customers while the goods are in motion toward the market.

"Our A. A. T. C. C. test is closer to meeting these requirements than any other test with which I am familiar. We exposed a vertically suspended $2\frac{1}{2}$ by ten-inch specimen to a $1\frac{1}{2}$ -inch Bunsen burner luminous flame for 12 seconds. The Quartermaster Corps uses the same test. The National Bureau of Standards, National Fire Protection Association, State of California and other organizations run the same flame exposure but use a two by $12\frac{1}{2}$ -inch specimen. Our A. A. T. C. C. apparatus requires a Bunsen burner with a pilot light attached. The position of the burner is fixed at all times and flame exposure is controlled by a valve which is simply opened for 12 seconds and then closed. The other organizations ignite the burner and slide it under the sample to start the test and pull it away after 12 seconds. We believe our control of the flame exposure is better here and we hope to see these other organizations adopt the pilot light system.

"Based on our extensive laboratory investigations of this test during 1945 and 1946 it is the general opinion of my committee that if the A. A. T. C. C. test is run as described in the *Year Book*, with the single exception that the sample be allowed to char in the test cabinet instead of in a separate hood, an efficient and uniformly processed fire-resistant fabric will pass the test and there will not be any significant differences between different laboratories. If, however, the fire-resistant fabric is of border-line efficiency, or if the finish has not been applied uniformly to the fabric, then we may expect significant differences in test results. At this time we have data which suggest that variations in relative humidity may throw a border-line fabric on either side of the line. The higher the humidity the more likely it is that a border-line fabric will pass the test.

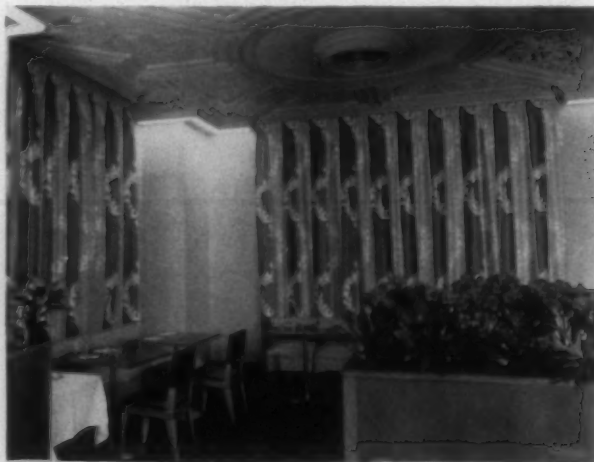
"Now I would like to get back at that sixth factor governing the value of the test method. I said that the test might be more valuable if it duplicates under measurable conditions, the test most likely to be used by mills, converters, wholesalers, retailers and customers while goods are in motion toward the market. The test most likely to be used in textile channels is the test that probably everyone in this industry has seen at sometime or other. It is run as follows—cut a sample of any size from a fire-resistant fabric, hold it vertically with one hand and set a burning match to it with the other hand. I think you may agree that as fire-resistant textiles move throughout the country this simple test will be conducted most frequently and the results will be used as basis for decision. This does not de-emphasize

the importance of a controlled test under controlled conditions, but rather indicates a factor which must be recognized by all people who propose tests for fire-resistant materials. If a machine test is less severe than the simple hand test, then the risk involved in depending upon the machine results is obvious.

"Our A. A. T. C. C. committee has an ambitious program underway at this time and we have the active support of the textile, chemical and plastics industries. Our committee members include people who have been inventing and patenting fire-resistant finishes, people who have been investigating and testing fire-resistant finishes, people who are applying fire-resistant finishes, and experts in the resin and cellulose fields."

Outlining the work of his committee, Dr. Hager said that about two years ago the A. A. T. C. C. was approached by the National Retail Dry Goods Association to set up standards for measuring the flammability of apparel fabrics. The reason for this had been a number of fatal accidents and particularly the passage of a bill in California in January, 1945, which banned all fabrics more flammable than cotton in its natural state. "As a result of this request, a special committee was formed," said Dr. Hager. "First we studied fabrics, but with very varying degrees. It was our aim to segregate the dangerous from the harmless fabrics and to do this with the help of a machine which would evaluate the rate of burning. Following our specifications, United States Testing Co. built such a machine for us which was changed many times before it finally developed into an all-automatic tester, operating with a standardized butane flame on which human error is eliminated. A method was then worked out which also had to undergo a lot of changes. For instance, we found it necessary to test out samples in a dry state, that is, in their most dangerous condition. We had to construct a combing machine to equalize the surface of shaggy fabrics; we adopted a simple washing and drycleaning procedure to remove water and solvent soluble flame retardant finishes which would lull the user into a false sense of security.

"The method establishes the rate of burning by measuring the speed with which a flame will travel over the surface of a fabric suspended on a specimen rack at a 45° angle. Any five-inch sample which burns faster than six seconds is to be considered dangerous. This dividing line was



Drapery fabric woven of non-combustible Fiberglas yarns and flame-proofed cotton yarns in the new dining room and cocktail lounge of the Hotel Sherry-Netherland in New York City. The fire-resistant property of the fabric permits its use even where the carelessly held cigaret of a guest comes in contact with it.

arrived at with special consideration of scores of fabrics which had actually caused fatal accidents. When we finally got good results, we constructed six more machines and then had the satisfaction that correlation on the same fabrics could be obtained in seven different laboratories in different locations.

"Then we submitted the machine and method to our research committee just one very busy year after starting, and we suggested its use for the testing of flammability of wearing apparel. The National Bureau of Standards decided to accept this machine and method as a commercial standard for which it had to be approved by hundreds of textile interests which brought scores of comments and necessitated dozens of minor revisions. It is now in its final draft. Incidentally, A. S. T. M. also intends to adopt our machine and method.

"Meanwhile, in California, the first bill which was not enforceable had been amended. It now left the decision as to what are flammable fabrics to the discretion of the fire marshal, Mr. Yockers. Mr. Yockers had constructed a tester much like our model, yet with various differences. To give any possible technical advice and to defend our A. A. T. C. C. method, three of our committee members—Mr. Dorn, Dr. Bonnet, and I—went to Los Angeles and after demonstration and many discussions, Mr. Yockers and his group decided to drop draperies and stick to wearing apparel only. Later, Mr. Baker of our committee went to Los Angeles to

bring clarity into the situation and fortunately he succeeded in having the fire marshal accept the A. A. T. C. C. tester. Recently the Plastic Manufacturers Association has set up with us an elaborate program to test unsupported plastic films and coated textiles, and a second subcommittee is under formation which will study the flammability of plastic adornments.

"It is, of course, highly desirable to have Federal legislation, not only in order to stop possible confusion of individual states laws, but primarily to give protection to the public and to stop claims on converters. Some of our committee members have for many months worked in an advisory capacity with legal councilors of National Retail Dry Goods Association which has set up a proposed Federal bill based on our commercial standard. This bill was recently introduced in the House by Congressman Arnold and in the Senate by Senator Capehart, who have already been called before the Interstate Commerce Committee. If enacted as a law it will not mean hardships to the industry. In the first place, only a very small percentage, probably not more than one or two per cent of all textiles will be found vulnerable according to our test and these few can be continued to be manufactured as they can now be made flame-resistant without losing their character. Five new flameproofing processes have been developed since our committee commenced to operate, all undoubtedly stimulated by the publicity which this work created."



Ben Berman Experimenting With Dual-Purpose Cotton



A NEW dual-purpose cotton to bridge the century-old gap between farmer and textile mill is being sought this spring by B. F. Berman, vice-president of Stonewall (Miss.) Cotton Mills, Inc., through an experiment in breeding that may revolutionize the whole industry. On a test plot on the company's acreage here, 20 miles south of Meridian, a cotton breed that will combine the qualities of better hill-side production, which should benefit the farmer immensely, and a fiber of such quality that the average textile machinery will handle it more readily than the usual run of cotton, is being sought—a better producer and a better spinner in the same cotton.

If successful, the tests should provide the trade, from cotton field to the finished cloth, with accurate knowledge along this line for the first time in history. "We feel that a combination cotton more suitable to both grower and mill is one of the greatest needs of the industry," declares Mr. Berman. "It would prove of inestimable value

to the cotton farmer. It would enable him to produce a cotton for which there will be four buyers for every bale. It would enable him to speed the sale of his cotton, if and when he's ready to sell, because of the standardized quality. Textile mills in Mississippi have difficulty at times in obtaining satisfactory grade and staple. A cotton found suitable for both grower production and mill handling, and close at home at that, will be of tremendous help to the industry."

Mr. Berman says that if such a standardized, dual-purpose cotton becomes available, it would represent one of the greatest advances in many years. It would help the researchers who in recent years have sought desperately to improve production of cotton to combat the specter of rapidly-diminishing labor supply. It will help cotton in its battle with synthetic fibers, he thinks. As a starter, the test plot will be cultivated exactly like most of the farm-run cotton is cultivated—with a mule and plow and without benefit of spe-

cial fertilizer or man-made weather conditions, such as a hot-house test might require. On the other hand, this test cotton will enjoy no special privileges as compared with cotton grown throughout this region.

One brand of cotton seed will be thoroughly tested this year, a seed that from all advance indications, has the greatest promise of producing the dual-purpose cotton sought. At the conclusion of the test, which will carry the cotton itself through the carding, spinning and weaving machinery, the results will be made public and cotton farmers will be given all possible encouragement in producing this special breed on an extensive basis. Next season, Mr. Berman expects to continue the tests with the use of different kinds of seed, with special fertilizers and machinery in the fields to provide all possible experimental data for farmers. Stonewall Cotton Mills, having been in operation continuously since 1868, is not otherwise engaged in the growing of cotton itself.

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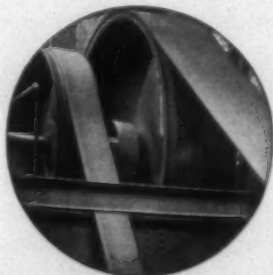
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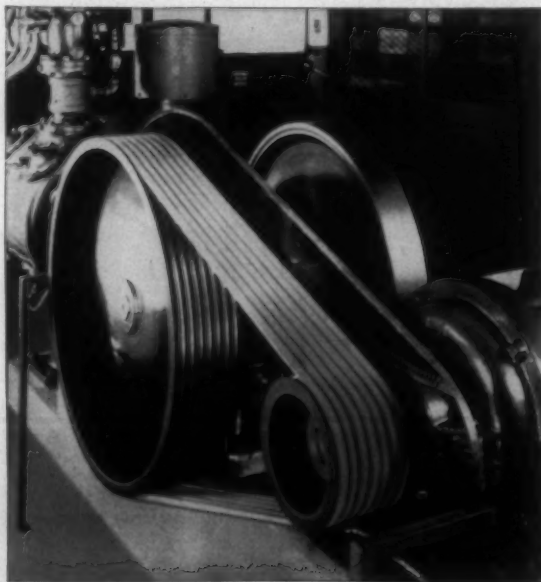
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A Time Of Uncertainty

The air is full of rumors and reports about price recessions and the accumulation of cotton goods by mills.

An overseer asserted last week that every warehouse in his city was filled with cotton goods which had been manufactured but were, as yet, unsold.

President Truman's demand for price recessions, in all lines, has resulted in one large mill announcing price reductions upon its line of towels.

Cotton spindle hours for March, 1947, have just been announced as 10,029,510,000 as against 9,132,654,000 during March, 1946, and that does not indicate that production is being slowed by the alleged decline in the demand for cotton goods.

Having observed the tactics of the buyers of cotton goods and yarns for almost 50 years, we do know the effectiveness of the propaganda which can be put out for the sole purpose of being able to buy at lower prices.

We also know that buyers are usually only interested in buying at lower prices but will continue to sell the same goods at the highest prices they can obtain.

We seriously doubt that consumers of cotton goods would benefit for many months by any price recessions now made by cotton mills.

The drive against cotton goods prices was definitely under way when the Cotton-Textile Institute met in New York City last October and has continued since that time.

At that meeting it was impossible to meet any buyer of goods or yarns, or any selling agents for same, without being regaled with reports relative to price recessions and a lessening demand.

Many of the rumors and reports, then being broadcast by persons who would benefit by lower prices, were false but they have been repeated so many times and so widely broadcast that they have finally had some effect upon the market.

Radio commentators have rendered much help to those who have sought lower prices by constantly predicting a

general recession in business this summer and fall and their predictions have undoubtedly been responsible for the recession in prices upon those textile mill stocks which are listed upon the New York Stock Exchange.

There are a few lines of coarse cotton goods and yarns for which there is now small demand but on the other hand many mills are still unable to supply those who wish to buy their output.

We do, however, urge mills to promptly curtail their output, no matter what it may be, just as soon as they find it impossible to sell as fast as produced.

There are many young men, now operating mills, without adequate knowledge of those days when large stocks of goods were held in mill warehouses and the effect such accumulations had upon prices.

Older men can tell them about the long periods of operating mills and selling goods below cost of production, solely because of the fact that buyers knew about accumulations of goods and in many cases magnified their size.

With cotton at its present high level and with high cost of production due to high wages, we feel certain that no experienced cotton manufacturer will continue to operate when he cannot sell his output.

While we realize that the well organized campaign to break the price of cotton goods has had some effect, we are not pessimistic and believe that if there is no accumulation of goods there should be a steady demand for the output of cotton mills.

Some recessions in prices can be, and in many cases should be made, but rather than meet the extreme ideas of buyers, it will be well to suspend third shift and in some cases second shift operations.

Prior to World War II, cotton mills had a few periods of prosperity but many periods of curtailment or operations which showed actual losses.

The actual net profits of cotton mills from 1920 to 1939 were less than that of almost any other industry in the United States.

The war is over and buyers of cotton goods and yarns are working to put the industry back upon the low income basis of pre-war days.

Accumulating goods and yarns and putting them in warehouses will be the first move towards a return to those days.

Excitement At Chapel Hill

The town of Chapel Hill, N. C., has for several years been afflicted with a "crank," a Presbyterian preacher named Charles M. Jones, who was brought there from Tennessee.

He is the type of minister who, like the Holy Rollers and the sect which handles live snakes, interprets the Bible to suit his own warped ideas and he seems to be hipped upon the subject of social equality with Negroes.

When, during the war, a Negro band was sent to Chapel Hill to furnish music for the Navy preflight trainees, Mr. Jones saw a great opportunity.

He began to invite the Negroes to his church for ice cream socials and also encouraged white girls to attend and have dates with the Negro men.

Encouraged by the success of that effort, Mr. Jones invited students and professors from a Negro college at Durham, N. C., to a breakfast at his church.

Four students and a professor accepted and each was seated at breakfast beside a white girl.

These actions were not well received by citizens of the town of Chapel Hill and at one time a group was organized for the purpose of running the so-called "Rev." Jones out of town.

However, the elders of his church, which included President Frank P. Graham of the University of North Carolina, approved his action with a written and signed statement, of which we have a copy, and we are also informed that both the Baptist and the Methodist ministers gave their approval.

More recently a Negro songstress was brought to Chapel Hill, and by a prearrangement Negroes and whites were seated beside each other at the concert.

When questioned by trustees of the University, Dean House of the Chapel Hill unit approved the seating arrangement and said that he saw nothing wrong with it.

After the concert the Negress and some members of her staff spent the night as house guests of Mr. Jones, the Presbyterian minister.

This month two New York Negroes were brought to Chapel Hill for the express purpose of testing North Carolina segregation laws which provide that Negroes and whites shall be seated separately on busses and trains.

The Negroes and two white students of the University of North Carolina who co-operated with the Negroes said that they were members of the "Fellowship for Reconciliation," which is a communist-front organization.

Chapel Hill is a Southern town and has many citizens who do not feel that they must accept any and everything, even social equality with Negroes, simply because it is approved by President Frank Graham or some member of the faculty.

It is also true that a large majority of both the faculty and student body, probably 80 per cent of each, are primarily interested in education and are opposed to the university being classed as an ultra-liberal institution where social equality with Negroes is a tenet.

The New York Negroes were arrested when they refused to take the seats assigned to Negroes and the two white students, one of them Igal Roodenko of New York, were charged with interfering with arresting officers.

Taxicab drivers beat up a white man who was caught affiliating with a Negro woman at the bus station.

Charles M. Jones, the Presbyterian minister crank, was, of course, active in the whole matter but sent his wife out of town after what he alleged was a threatening message.

He reported that a crowd gathered around his house and threw rocks at a man named Hilton Seals who was leaving his home.

No such incidents could or would happen at the University of Virginia or the University of South Carolina.

It would not have happened at the University of North Carolina had not President Frank Graham, an elder in the Presbyterian Church at Chapel Hill, given support and encouragement to Charles M. Jones, the minister of that church, when he staged ice cream socials and breakfasts for the deliberate purpose of causing white girls to have dates with Negro men.

No Southern state has shown greater interest in the welfare of its Negro population than North Carolina, but it does have segregation laws and it certainly intends to enforce those laws.

Bringing New York Negroes to Chapel Hill for the purpose of deliberately violating North Carolina laws may appeal to a crank like the Presbyterian minister, Charles M.

Jones, but will tend to disturb the friendly relations which have existed between whites and Negroes.

There are always a few crack-pot students in a university or college, but it is unusual for them to have the encouragement and support which they receive at Chapel Hill.

A New Beginning

We note the following cable:

Tokyo, Japan.—Allied headquarters announced today that the United Kingdom, Turkey, Burma, and several British administered areas had ordered 140 million linear yards of Japanese cotton fabrics—first post-war purchases of such material by those countries. The United Kingdom bought 64 million linear yards which it is expected to process for export to colonies and administrative areas. Orders announced today also provide for shipments to Italian North African colonies, now British-administered; the Anglo-Egyptian Sudan, Aden, and Northern Rhodesia.

This is just the beginning of a movement in which American textile mills will become more and more interested.

Prior to World War II, the pay of textile workers in Japan was about 10 cents per day and we doubt that it is much higher now.

Textiles manufactured by low-paid workers in Japan will for many years be able to undersell American mills which are now paying a minimum wage of 72 cents per hour, with the average much above that figure.

What chance has an American mill paying 37 cents for cotton, and \$6 per day to employees, to compete in foreign markets against a Japanese mill buying cheap cotton from India and paying spinners 10 cents per day?

There are many members of Congress who favor the reductions of tariffs and the admission of foreign goods into our domestic markets.

We are informed that the last shipment of cut rayon fiber, made by Japan prior to its entrance into the war, was 12.5 cents per pound f.o.b. ship in a Japanese harbor.

The quality of that cut fiber was not equal to similar fibers made in the United States but the fact that Japan could manufacture and sell rayon fibers at 12.5 cents per pound does not offer encouragement for the future.

The day is going to come when the competition of Japanese textile mills, and those of other countries, will be felt not only abroad but in our domestic markets.

Fortunately, many Japanese spindles were destroyed during the war, but knowing that they can greatly undersell American mills, they can be expected to rebuild and greatly expand.

European countries, while they will not have the same lower wage scale as Japan, pay their workers much less than the present scale in the United States and there will be ever increasing competition from them.

Due to slow economic recovery, many countries have not yet been able to produce goods for exports but in order to recover they must manufacture and sell abroad, and it will not be many months before competition will be felt by our mills.

Challenge To Cotton

An acre of Carolina soil planted in timber yields up to 400 board feet increase in a single year. Because of this—plus the limited supply of timber for pulpwood, veneer and general purposes—timber cropping in the future promises to go ahead of cotton in net profit to the Southern farmer.—*Charlotte (N. C.) Observer.*

STATESVILLE, N. C.—Abernathy Yarn Mills soon will complete an enlargement program which will add 24 twist-ers and 13 spinning frames to present equipment.

SYLACAUGA, ALA.—Avondale Mills' 26th annual spring inspection will take place this year May 5 through May 7, according to a company announcement.

ROCK HILL, S. C.—Celanese Corp. of America recently announced that a proposed cellulose producing plant in British Columbia would assure raw material supplies for the company's huge acetate rayon filament yarn plant to be completed here late next year.

ROCKINGHAM, N. C.—The building and village of Hannah Pickett Mills, Inc., has been sold to J. P. Stevens & Co., Inc., of New York City. The present cotton processing machinery is to be sold separately by Colonial Mills, Inc., of New York City, which operated Hannah Pickett. The Stevens concern will install woolen machinery in the plant.

ABERDEEN, N. C.—Colonial Mills, Inc., has purchased a site in Aberdeen, where it will erect a new plant for production of spun rayon goods. Other plants operated by the concern are Mid-State Cloth Mills at Red Springs, N. C., and Robbins (N. C.) Cloth Mills, Inc. A two-for-one split-up of capital stock, recently recommended by directors, was

approved recently in New York City at a meeting of Colonial stockholders. Frederic H. Brandi, vice-president of the investment banking house of Dillon, Read & Co., was elected to the board.

DALTON, GA.—Purchase by Wells Moore of the interest formerly held by Julian M. Longley in Dalton Textile Corp. has been announced. The plant operates 3,000 spindles on carded yarns. New company officers are J. K. Dickson, president and treasurer; Mr. Moore, secretary and general manager; Mrs. J. K. Dickson and Mrs. Rose H. Moore, vice-presidents.

GREENVILLE, S. C.—Purchase of outstanding stock in Union Bleachery is being effected by Aspinook Corp. of Jewett City, Conn., and its affiliated concerns, Lawrence (Mass.) Print Works and Arnold Print Works of Adams, Mass. R. W. Arrington will retire as president and be succeeded by W. A. Broadfoot, head of the purchasing firm. John W. Arrington, Jr., vice-president and treasurer, Nelson B. Arrington, assistant treasurer and buyer, will continue in their present positions along with other operating officials. The retiring president is expected to be elected a vice-president.

NASHVILLE, TENN.—American Fabriglass Products, Inc., has begun the manufacture of Fiberglass automobile seat covers, draperies, mattress and ironing board covers in its plant located at 417 Lafayette Street. M. M. Washburn, Jr., is president and general manager, and J. R. Cheshire, Jr., is secretary-treasurer.

BAMBERG, S. C.—Santee Textile Mills in the near future will add 5,000 spindles to its present 15,326 and increase its weekly payroll by about \$5,000.

ALBEMARLE, N. C.—American Yarn & Processing Co., with headquarters at Mount Holly, N. C., has acquired a controlling interest in Efid Mfg. Co., capitalized at \$1,500,000 and operating 54,360 spindles.

GREENVILLE, S. C.—Safety efforts of employees at Judson Mills were rewarded last month for working two million man-hours without a lost-time accident when Liberty Mutual Insurance Co. presented its accident prevention flag to the plant and its workers.

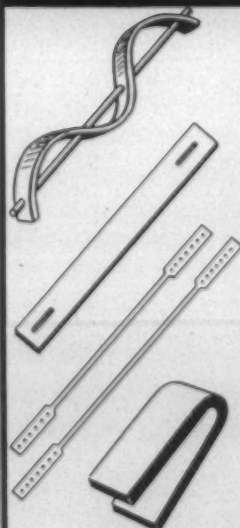
Phi Psi To Meet In Charlotte May 2-4

Phi Psi, national textile fraternity, will hold its national convention May 2-4 in Charlotte, N. C. The meeting, first held in six years, is expected to attract 150 persons. Harold C. Wood of Providence, R. I., president, will preside. Tom L. Church of Charlotte is grand vice-president. The convention will open with a buffet supper Friday evening, May 2, and the following morning the election of officers will be held and other business conducted. Mr. Wood is slated for re-election and Earl M. Heard of West Point, Ga., is expected to be named vice-president. Theodore B. Hayward of Philadelphia will be the principal speaker at the convention banquet the evening of May 3, and A. R. Thompson, Jr., of Charlotte will be toastmaster.

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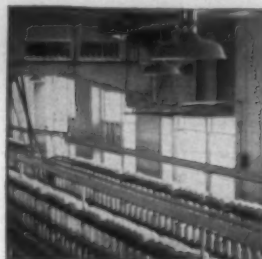
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PERSONAL NEWS

Mayberry W. Rozar, director of research and development for Bibb Mfg. Co. at Macon, Ga., has been elected president of the Macon Rotary Club.

New officers of Patterson (N. C.) Mills, Inc., are Malcolm A. Angus of New York City, president; W. M. Nicholson of Charlotte, N. C., vice-president; David Brown of New York, secretary; and Edwin Citron of New York, treasurer. The plant was purchased recently from Patterson Textiles, Inc.

Walter M. Schwartz, Sr., chairman of the board of directors of Proctor & Schwartz, Inc., Philadelphia, Pa., recently was presented an inscribed desk clock and fountain pen set by company employees upon the 50th anniversary of his association with the firm.

Dr. Helmut Wakeham, formerly with the Southern Regional Research Laboratory at New Orleans, La., has joined the staff of the Institute of Textile Technology, Charlottesville, Va., to work in its division of physical chemistry.

Farrel-Birmingham Co., Inc., Ansonia, Conn., has appointed D. K. MacLean export manager for all lines of machinery produced in the firm's four plants.

Harrison C. Bristoll, general manager of the steel strapping division of The Stanley Works, New Britain, Conn., has been elected a vice-president of the firm.

W. M. Moore, superintendent of Broad River Mill at Blacksburg, S. C., has been elected president of the Blacksburg Rotary Club.

N. Winroth, with Union-Buffalo Mills Co. at Union, S. C., for the past 25 years, has succeeded the late E. W. Metzger as superintendent of Darlington (S. C.) Mfg. Co.

H. T. Mahaffey, formerly assistant superintendent, has been appointed superintendent of the Elm City Plant of Callaway Mills, LaGrange, Ga. Fred Gillam, formerly head of the job standards department in the company's USEO Division, has succeeded Mr. Mahaffey as assistant superintendent.

Malcolm C. Link of Goodyear Clearwater Mills has been elected president of the Rockmart (Ga.) Rotary Club.

L. M. Graves has resigned as treasurer of Phoenix Mills, Inc., at Statesville, N. C. Mr. Graves was president and treasurer of the firm at the time of its purchase by Beaunit Mills in 1942.

Herman Cone, president of Proximity Mfg. Co. at Greensboro, N. C., is one of

15 American business executives now in Germany for a three-week study of German industrial and export problems.

Jack Frye, formerly president of Trans-World Airlines, has been elected board chairman of General Aniline & Film Corp. and General Dyestuff Corp., according to an announcement by Attorney General Thomas C. Clark. George W. Burpee, formerly chairman as well as president, was re-elected president.

Hearne Swink, vice-president and secretary of Cannon Mills Co. at Kannapolis, N. C., and P. H. Hanes, Jr., assistant secretary and treasurer of P. H. Hanes Knitting Co. at Winston-Salem, N. C., were initiated recently into the North Carolina State College chapter of Phi Psi, honorary textile fraternity. The group's man-of-the-year award was presented to Dr. Thomas Nelson, dean emeritus of the State College school of textiles.

William Klopman, formerly senior vice-president of Burlington Mills Corp., Greensboro, N. C., has formed the firm of William Klopman & Sons, Inc., to sell rayon gray goods at 450 Seventh Avenue, New York City. Mr. Klopman recently purchased Covington (Va.) Weaving Co. from Burlington Mills.

George S. Buck, Jr., and Henry A. Rutherford have joined the National Cotton Council's department of technical service at Memphis, Tenn. Mr. Buck formerly was superintendent of the finishing department of William E. Hooper & Sons Co. Mr. Rutherford was assistant director of research for Milton Harris Associates.

W. A. Julian of Cramerton, N. C., cotton buyer for Burlington Mills Corp. plants, has been elected president of the Gaston County Tuberculosis Association.

George J. Swift has resigned as manager of the American Woolen Co. blanket department in New York City to become vice-president of Leaksville Woolen Mills, Inc., at Homestead and Spray, N. C.

John H. Matthews has been elected vice-president of Raybestos-Manhattan, Inc., in charge of the Manhattan Rubber Division at Passaic, N. J. Also a new vice-president of the parent company is O. H. Cilley, assistant general manager of the United States Asbestos Division at Manheim, Pa. A. F. Heinsohn, general manager of the General Asbestos and Rubber Division, North Charleston, S. C., has been elected to the Raybestos-Manhattan board of directors.

Under a newly adopted regional set-up for the Allis-Chalmers Mfg. Co. general machinery division, new district office man-

agers in the Southeast are J. J. Greagan, William Parker, J. W. Roberts, G. H. Hoffman, A. R. Knauss, Joseph Bronaugh, R. F. Muller and A. D. Robertson at Birmingham, Ala., Charlotte, N. C., Chattanooga, Knoxville and Memphis, Tenn., New Orleans, La., and Tampa, Fla., respectively. They report directly to D. S. Kerr, manager of the region, who is succeeded as manager of the Atlanta district office by Charles F. O'Riordan. Mr. Robertson succeeds the late Berrien Moore at Tampa.

R. H. Tuttle, former manager of the Zion, Ill., curtain plant of the Marshall Field & Co., Fieldcrest Mills Division, has been appointed manager of the research and quality control department of all ten Fieldcrest units. His headquarters will be at Spray, N. C.

Harold Clark, who has been superintendent of the Sallie B. Plant of Avondale Mills, Sylacauga, Ala., has succeeded J. A. Byars as superintendent of the firm's Pell City Plant. Dwight E. Epperson, previously night superintendent at Sylacauga, becomes Sallie B. superintendent.

R. L. Huffines, Jr., has been named president and a director of Burlington Mills Corp. of New York, and W. Malcolm Brady, John P. Doyle, Walter S. Horne, Joseph W. Stark, and Alfred C. Werner, vice-president and directors. Mr. Huffines, formerly vice-president of the New York company, will, in his new capacity, direct the sales activities of the entire Burlington Mills organization. In addition to his duties with the selling company, he is a vice-president, director and a member of the executive committee of Burlington Mills Corp., with offices at Greensboro, N. C. . . . In the company's manufacturing organization, C. H. Sanders, superintendent of Newton (N. C.) Rayon Mills for six years, has exchanged positions with R. D. Buie, superintendent of Bristol (Tenn.) Weaving Co. R. L. Poovey has been shifted from the position of superintendent of Cascade Rayon Mills, Mooresville, N. C., to a similar capacity in the Burlington plant at Sherbrooke, Canada. Guy Byrd, previously at Sherbrooke, takes over the Cascade post.

D. D. Quillian, manager of Athens (Ga.) Mfg. Co., has been named as a director of the National Bank of Athens.

Max Wehrin has been re-elected president of the American Silk Council, Inc., association of importers and dealers in raw silk. H. Lee Moss was re-elected vice-president and secretary and George Elbogen was re-elected treasurer.

Tamora G. Noyes, former fashion editor for American Broadcasting Co., has been

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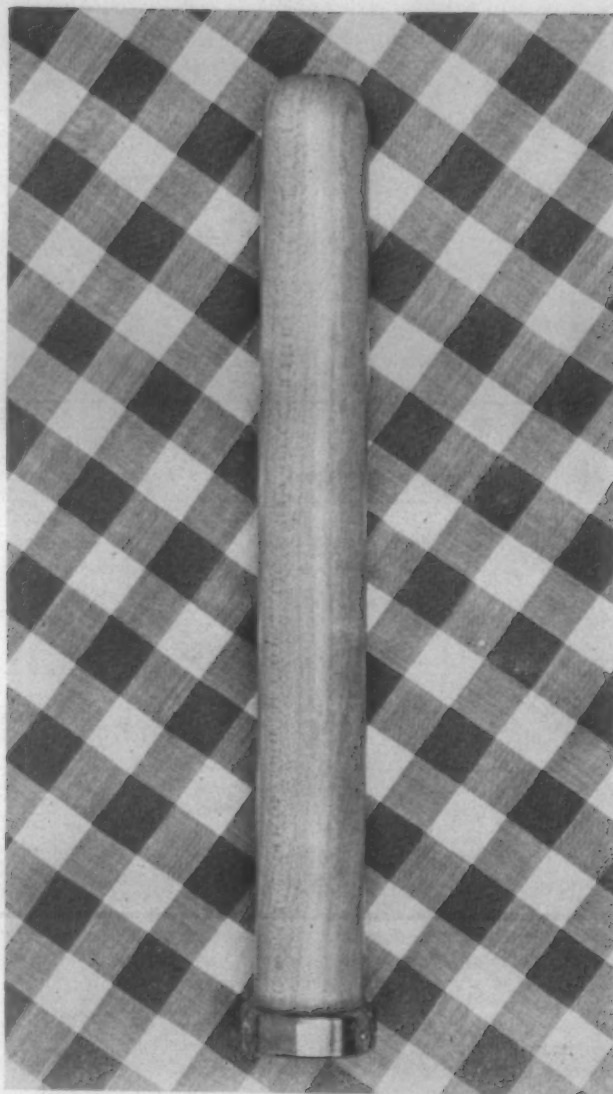
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appointed head of the new sales promotion department in the Warwick Chemical Co. Division of Sun Chemical Corp. Her work will supplement the advertising program on Warwick's featured fabric finishes.

Dr. Charles A. Thomas, vice-president and technical director of Monsanto Chemical Co. and a key figure in the development of atomic energy, has been awarded the 1947 Industrial Research Institute Medal, presented for outstanding contributions to the field of industrial research. The medal will be presented June 3 at the annual meeting of the institute at Swampscott, Mass.

Marc W. Laibe, veteran member of Goodyear Tire & Rubber Co.'s purchasing department, has been named assistant purchasing agent for the company. He joined Goodyear in 1925 as a member of the purchasing department and has been continuously associated with purchasing since that time.

Charles S. Underwood has been named representative in New York City for Brookside Mills, Inc., Knoxville, Tenn.

I. P. Crowther, associated with Deering, Milliken & Co., Inc., at New York City since 1925, has been made a vice-president of the firm.

Samuel M. Atkinson, chief chemist in the dye house laboratory of Chatham Mfg. Co. at Elkin, N. C., has been elected North Carolina director of the Air Force Association.

Dr. M. L. Crossley, director of research for the Calco Chemical Division of American Cyanamid Co., Bound Brook, N. J., has been selected unanimously to receive the 1947 gold medal of the American Institute of Chemistry. The award is being made in recognition not only of Dr. Crossley's scientific work and leadership in research leading to discoveries in the fields of dyes and pharmaceuticals, but also of his activities in behalf of the chemistry profession. Presentation of the medal will be made at the institute's meeting in May.

John W. Norwood, Jr., has been elected president and treasurer of Necessities, Ltd., Greenville, S. C., textile manufacturing firm. He replaces W. D. Young, resigned. Elected to the board of directors is George Norwood.

Dr. Carlyle Harmon, former manager of the chemical division of Marathon Corp., Rothschild, Wis., has been appointed director of research development of Chicopee Mfg. Corp., Brunswick, N. J.

Eugene Messner, who served until recently as director of the consumer goods division of the Office of Price Administration, has resumed his activities in the fabric market as president of a new textile firm, Loomskill Fabrics, Inc., a division of Herbert Mfg. Co., Inc.

Henry Sentlar has been appointed vice-president and member of the board of directors of Aqua-Sec Corp., New York City.

Harold B. Hoskins of New York has been elected to the board of directors of Textron, Inc., and also will be consultant to the company on marketing and merchandising.

Torrey M. Tyner has been appointed manager of the Suncook and Pembroke plants of Textron Mills, Inc., at Suncook, N. H., succeeding J. Raymond Fish, resigned. Mr. Tyner was superintendent of the Chadwick plant of Textron Southern at Charlotte, N. C., before going to Suncook.

Herman L. Weisler, director of operations of the Hopewell, Va., plant of Celanese Corp. of America, recently resigned from that position.

Dr. Frederic L. Matthews has been appointed associate director of research of Monsanto Chemical Co.'s Merrimac Division at Everett, Mass., and Dr. Matthews' former post of co-ordinator of petroleum additives in Monsanto's organic chemical division will be filled by Harry W. Faust, at present a group leader in petroleum chemical research in the division.

At a recent meeting of the board of Veeder-Root, Inc., Hartford, Conn., Arthur E. Kallinch and David J. Post were elected vice-presidents, and Andrew J. Rebmann was elected assistant secretary.

R. S. Dickson of Charlotte, N. C., president of American Yarn & Processing Co., is currently on a business trip to various European countries, where he will inspect textile properties.

OBITUARY

W. N. Williams, 65, who was superintendent of Rex Mills at Gastonia, N. C., until his retirement in March, 1946, after 56 years in the textile industry, died April 2. Surviving are his widow, two sons and two sisters.

Samuel B. Eskridge, 75, who retired in 1944 after serving 25 years as superintendent of Double Shoals (N. C.) Mfg Co., died March 29 of a heart attack at his home in Shelby, N. C. Surviving are his wife and nine children.

John P. Wright, 66, president and one of the founders of both Delaware Rayon Co. and New Bedford Rayon Co., as well as head of Continental-Diamond Fibre Co., died April 18 at a hospital in Wilmington, Del. Surviving are his widow, a sister and a brother.

Victor H. Elsas, 65, retired official of Fulton Bag & Cotton Mills of Atlanta, Ga., died last month in New Orleans, La., where he had made his home a number of years. A former vice-president of the company, Mr. Elsas retired in 1941 but continued as a director. Surviving are his widow, a son, a daughter and a brother.

Dorothy M. Hobson, assistant treasurer of Pepperell Mfg. Co., died April 13 at a hospital in Brookline, Mass.

E. L. Berry, 52, vice-president of Link-Belt Co., Chicago, Ill., and vice-president and director of Link-Belt Speeder Corp., died suddenly April 3 of a heart attack.

For the Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Allis-Chalmers Offers Texrope Drive Catalog

A new 144-page, indexed catalog for pre-engineered stock Texrope drives which simplifies drive selection so persons untrained in V-belt engineering can readily specify proper drives, has been announced by Allis-Chalmers Mfg. Co., Milwaukee, Wis. In the process of development by Allis-Chalmers Texrope engineers for more than a year, the catalog is said to represent one of the most outstanding

compilations of engineering data ever assembled for the V-belt industry. Nearly two-thirds of the new book is devoted exclusively to pre-engineered stock Texrope drives for all applications from one to 150 horsepower. More than 22,000 stock drives are listed in this section. Drives for all horsepower, motor speeds, ratios and driven speeds have been accurately pre-engineered and are systematically listed on die-cut pages, indexed according to horsepower.

Recently announced new pitch di-

ameter sizes of B and C Magic-Grip sheaves are used in many of these drives and have greatly increased stock drive selection possibilities. Texrope pre-engineering is the calculation and listing of a stock Texrope drive to meet a certain set of conditions, including horsepower, motor speed, ratio and overload factor. Wherever the same set of conditions exist, the same drive can be used with full assurance that it is as properly suited as it would be if individually engineered for each separate application. The Texrope meth-

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All parts are easily accessible and changeable, cutting repair time to a minimum.

Does not require Suction Fan or Dust Pit, thereby eliminating fire hazard.

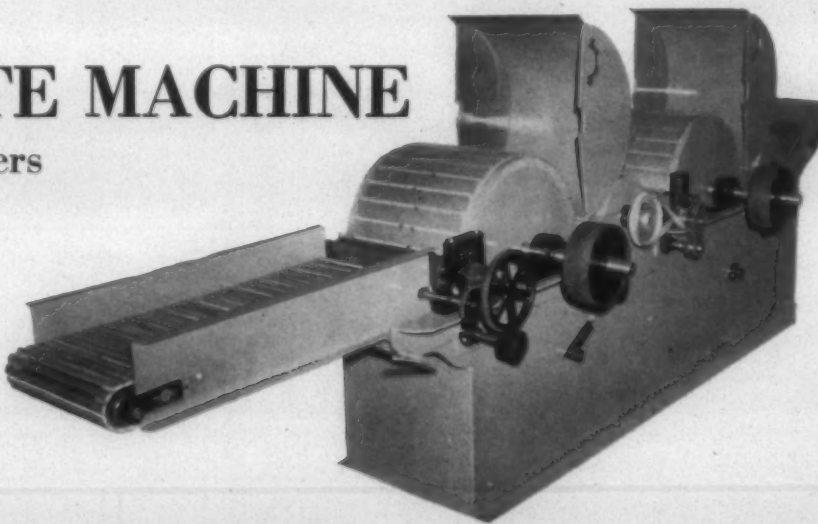
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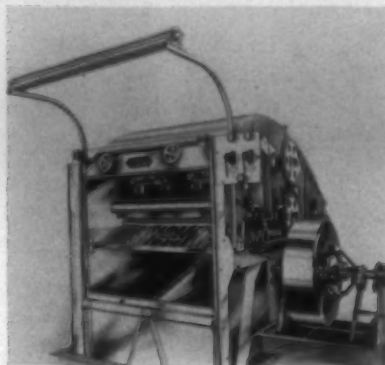
od of pre-engineering insures that where it is possible to fulfill the requirements of a drive from stock sheaves and belts, the most economical and best drive from an engineering standpoint is listed and can be easily and quickly selected from the new catalog, which is expected to be ready for distribution to Texrope users in June.

Rodney Hunt Announces Improved Fulling Mill

Rodney Hunt Machine Co. of Orange, Mass., announces the development of its No. 9 Air Express stainless steel fulling mill, and describes it as the best machine available for speed and trouble-free productive performance.

The accompanying illustration shows some of the features claimed by the builder. The tub, of stainless steel patented self-supporting construction, is easy to clean and requires no up-keep. The stainless steel top has no parts attached, thus is removable for easy servicing of the machine. A counter-weighted door at the front, hinged door at the back of the top, and the center partition are likewise of stainless

steel. The main roll pressure is maintained by Wring-Master pneumatic controls. Rodney Hunt states that it is now possible, for the first time on a fulling mill, to obtain instantly the exact pressure desired by simply setting a gauge on the front of the machine. Similarly, packing box pressure is regulated pneumatically through air cylinders mount-



ed on the packing box clapper. An instrument panel at the front of the machine carries two gauges and operating levers by which the pressure on either box may be set exactly and changed at will in split seconds. The packing boxes are lined with stainless steel plate over laminated plastic for

insulation and supported by cast iron for extra strength.

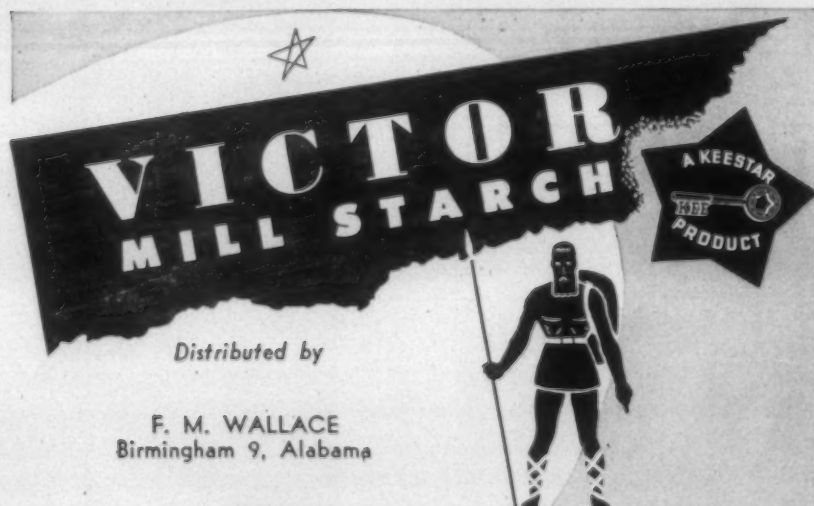
The throat guides are stainless steel, independently and infinitely adjustable by a handwheel located above the front door of the machine. The radically new ladder guide is stainless steel, adjustable for various numbers of strings, the position of which can be changed in an instant. The front roll is stainless steel and the unloading roll of Shaf-tite wood construction on stainless steel stands. An extra heavy roller chain drive to both main rolls from clutch pulley on the side countershaft is said to save 25 to 50 per cent on power over older machines of the same capacity. Heavy duty roller or ball bearings are used throughout the machine.

Resloom Manufacturing Plant In Operation

Monsanto Chemical Co. has announced the opening of a new plant at Springfield, Mass., for the manufacture of the company's Resloom. This textile chemical, a new type of melamine resin, imparts shrinkage control, muss resistance and stability to woolens, rayons, cottons and blends. The Springfield plant will have a yearly output capable of processing 50,000,000 yards of fabric. At the Springfield plant, melamine is converted into Resloom, which is sold by Monsanto to textile finishers and mills. The high degree of purity achieved in the new process has markedly expanded the potentialities of Resloom. This new process enables the production of softer fabrics than previously possible. In addition to wool, rayon and cotton, Resloom can now be utilized to improve acetate, nylon and protein fibers.

Calcosol Copper Brown Paste Is New Vat Color

Announcement of a new anthraquinone vat dye, Calcosol Copper Brown Paste, giving a reddish shade of brown with very good fastness to light, washing and bleaching, has been made by its manufacturer, the Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J. This new dye, with its shade and excellent working properties, is recommended to dyers not only as a good self color but also as a very important all-purpose shading color. It is said to be especially good as a shading color for dusty roses, grays and light to medium browns. Calco's announcement folder describing the new color, Calcosol



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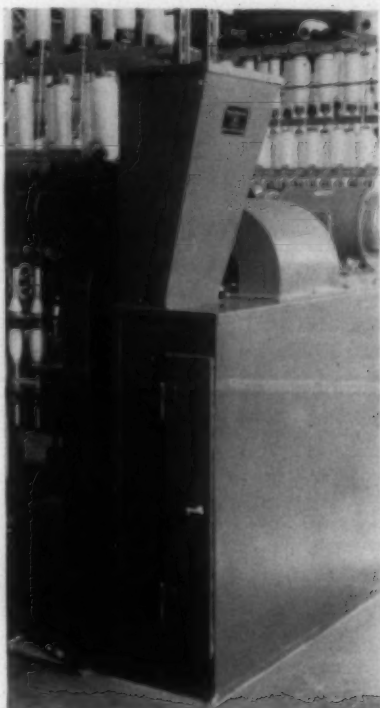
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Copper Brown Paste, may be obtained from Calco representatives or by writing the Advertising Department, Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.

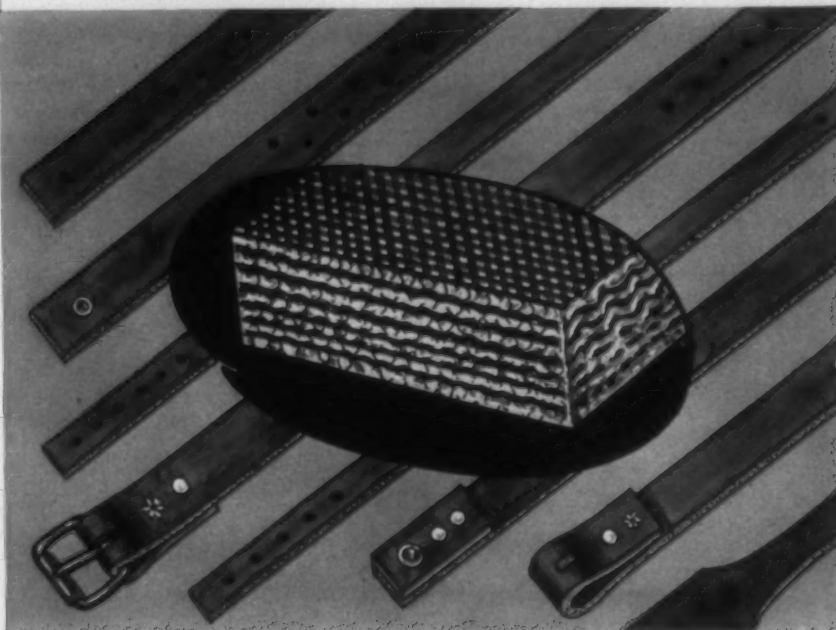
Ends Down Collected By Pneumatic System

A pneumatic system for picking up and collecting ends down on spinning frames is now being manufactured by Pneumafil Corp. of Charlotte, N. C. The system first was perfected in Switzerland several years ago by Luwa S. A. Pneumafil Corp. has acquired the patents, manufacturing and sales rights for the U. S. A., Canada, Cuba and Mexico. The equipment (see illustra-



tion) consists primarily of suction headers (called flutes), collecting header and collector unit with fan and filter. The flutes, which replace the clearers or scavenger rolls, are provided with orifices spaced to coincide with roll deliveries. They are connected to the collecting header fitted underneath the creel which passes to the collector unit usually located at the end of the frame. The Pneumafil system, operating on the pneumatic suction principle, removes free fly or lint from the yarn as it emerges from the front rolls. When there is an end down, the drafted roving leaving the front rolls is sucked into the corresponding orifice immediately and conveyed pneumatically through the collecting header to

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the collector unit. Here it is accumulated and retained by the filter in the form of "open and loose" material ready for reprocessing. When equipping a considerable number of frames or an entire spinning room, the central system of Pneumafil is usually recommended as advantageous. Power consumption and first cost is less than with the unit system. Air from the system can be exhausted outside or returned to the room through air-conditioning or ventilating equipment. Better air-conditioning is made possible since room air is drawn at a uniform rate down through the frame and directly across the yarn as it is being spun. The central system can be arranged to provide individual collection for each frame or central collection for a group of frames. In the latter case, the collected material may be conveyed pneumatically directly to the picker room for reprocessing.

The overall advantages of Pneumafil are listed as improved quality, greater production and lower labor cost.

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21 COLORS WHITE

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PER CASE OF 4½ GROSS

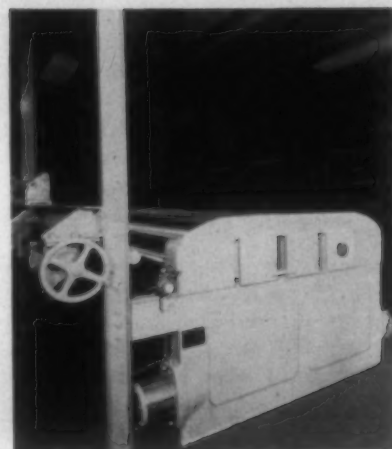
UNION CRAYON CO.

LOWELL, MASS.

Some of the specific advantages claimed are: Ends down are reduced—there are no longer any "ends down caused by other ends;" double threads are eliminated. The work runs better because the salvaged cotton is re-usable without processing through a waste machine, thus the fibers remain unbroken. The work of spinners and cleaners is reduced; scavenger rolls (lapsticks) are eliminated. Training time of spinner learners is shortened and their spoilage of work is decreased. Spinners like Pneumafil, their work is made simpler and easier, they experience less nervous strain and its resultant fatigue. Housekeeping and waste salvage also are benefitted. Air conditions are improved particularly when air-conditioning is combined with Pneumafil. Gouts and slubs are decreased.

Butterworth Offering Interchangeable Parts

How deliveries of textile machines can be accelerated by production of parts that are interchangeable is a current research project of H. W. Butterworth & Sons Co., 2417 East York Street, Philadelphia 25, Pa. The progress made so far is reflected by new tenters now in production and by a horizontal pad that is literally six machines in one. The Butterworth straight automatic tenter, which operates at speeds in excess of 200 yards per minute, and the Butterworth mercerizing tenter use the same drive shaft, reduction heads, bearing support rails, etc.



The new Butterworth three-roll horizontal padder, as illustrated, is actually six machines under one streamlined cover. With minor variations in boxes the horizontal padder becomes an extracting mangle, a caustic impregnator, a universal padder, or a starch mangle. Or with a change of rolls, the machine becomes a 15-ton rayon calender. Rolls of any diameter can be used without new parts or major revisions.

In addition to accelerating the production of machine parts the Butterworth program is giving mill owners more versatile equipment. Machines can be changed over quickly and easily whenever required by advances in textile chemistry. At present, changes in formula or process often require completely new machines. This means the loss of time and production, and the increased expense of replacing old machines. These new machines are designed for easy conversion to do sev-

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eral jobs. Butterworth machines are being built in improved designs. Streamlined (of stainless steel where necessary) protect all working parts and act as safeguards against accidents. These covers are also designed to prevent the splashing and leaking of liquor. This results in a saving of chemicals and eliminates puddles and damp floors.

Because these machines are expected to be versatile enough to run cotton, wool, and rayon as well as new fabrics, it is essential that the operator have complete control of all mechanical variations at all times. Therefore, all controls are built into the machines within easy reach of the operator. New meters and indicators afford positive and close control. According to the company, the standardization of machine parts now being pioneered by Butterworth and the improved machine designs mark the beginning of a new era in the textile industry . . . an era of greater co-operation between the chemist, engineer and manufacturer. The result will be new processes, increased production, new and better textiles, and improved textile machinery.

Broadside On Speed Selector Is Offered

A broadside on the new improved Variable - V - Planetary infinite ratio Speed Selector recently announced jointly by Speed Selector, Inc., Cleveland, Ohio, and B. F. Goodrich Co., Akron, Ohio, has just been published by the latter. Copies may be obtained upon request. The broadside describes the rugged construction of the Speed Selector, which employs planetary motion with four variable pitch sheaves and two standard cross-section V-belts to provide any speed from zero to 800 r.p.m. at constant torque from a constant speed power source. Featured is a page outlining the engineering principles of the Speed Selector's operation, with illustrations, and another which lists dimensions, horsepower and torque ratings of the three models available in one-half, one and two horsepower output.

New Sulfate Detergent Announced By Alrose

Alrosene 31, a modified alcohol sulfate detergent described as a free-flowing, non-sneeze, off-white granular powder with a pleasing soap-like odor, has been announced by Alrose Chemical Co. of Providence, R. I. It is said

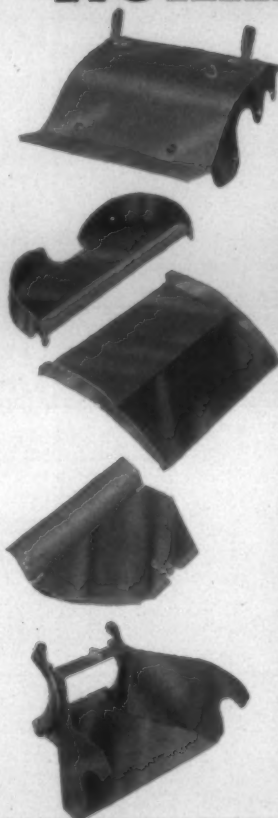
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to find its main application in soaping prints, improving shade brightness and hand, eliminating scumming and reducing color bleeding. As a scouring agent for raw wool, rayons and cottons, Alrosene 31 permits operation at lower temperatures, causes no lime soap deposits, discoloration, rancidity or interference with further processing. It also is suggested as a levelling agent and penetrant with acid dyes, vats, developed sulfurs and direct colors. A technical bulletin relative to the new product may be secured from Alrose.

New Demineralizer Cuts Water-Treatment Costs

A new Filt-R-Stil water demineralizer, known as the Model U-60, has

recently been developed by the ion exchange products department of American Cyanamid Co. The Model U-60, like other Filt-R-Stil demineralizers, is designed to transform ordinary tap water into the chemical equivalent of distilled water—at a small fraction of the cost of distilled water. It requires no heat, no steam, no auxiliary equipment, and only enough electricity to light a six-watt bulb.

The Model U-60, shown at right, is designed to operate at a 60-gallon per hour flow rate, and can be used to deliver water containing a maximum of ten parts per million of ionized solids—or as little as one part per million. A built-in controller indicates the actual quality of all treated water leaving the unit; no auxiliary

analytical tests are required. The controller measures the electrical resistance of the treated water.



Four columns containing alternate beds of ionac cation and anion exchange resins constitute the bulk of the unit. Water is passed through the four columns in series; the cation resin transforms the dissolved salts present in the raw water into acids, and the anion resin then absorbs the acids. Due to the particular characteristics of ionac resins, which are also manufactured by Cyanamid, the Model U-60 can also be used to deliver water free of carbon dioxide; no auxiliary deaeration equipment is necessary.

When the resins have used up their capacity for demineralization, they are then regenerated by flowing dilute acid and alkali solutions over them, rinsed, and ready for reuse. These cycles of use and regeneration can be repeated indefinitely. The Model U-60 is completely assembled and ready for immediate operation as shipped. It requires only connection to the raw water line, and to drain and electrical outlets. Until the resins become exhausted, the unit requires no attention and can be left running over-night if desired.

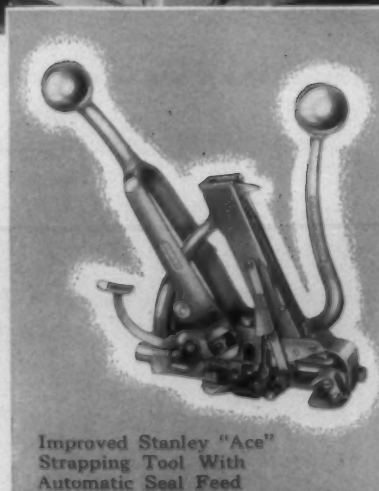
Other standard Filt-R-Stil demineralizers are available in capacities ranging from eight to 1,200 gallons per hour; larger units are specially designed for the user's particular needs. Further information may be obtained from American Cyanamid Co., Ion Exchange Products Department, 30 Rockefeller Plaza, New York 20, N. Y.



With this light, easy-to-use, improved Stanley "Ace" Strapping Tool!

Even beginners can do a fast, expert strapping job with the improved Stanley "Ace" Strapping Tool. Positive spring feed holds a 100-seal clip in magazine in any position. One lever tensions strapping, other cuts strapping, feeds and crimps seal all in one quick motion—all in only 5 seconds.

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Revised Booklet Offered By United States Testing

United States Testing Co., Inc., has revised its booklet, *Testing Terms for Better Understanding*. This is a new printing of the booklet, dedicated to better understanding of some of the important tests of merchandise—how tests are made, what the results mean, what are standard and minimum specifications. The new booklet includes a description of the abrasion test, with standards on various types of fabrics, description of ageing, air permeability and animal injection tests among others. Flexural strength is defined and a detailed description of hosiery analyses is given. Standard textile regains for all textile fibers are listed. The seam slippage test is described. The warmth tester, as developed by United States Testing Co., Inc., is included, together with minimum serviceability standards and warmth coefficient for blankets. Copies may be secured by writing to the main laboratories of the United States Testing Co., Inc., at Hoboken, N. J.

Fiber Extensometer Developed By Harris

Development of a new apparatus for studying the load-elongation properties of single fibers is announced by Harris Instruments, Inc., 1246 Taylor Street, N. W., Washington 11, D. C. Based on the principle of an automatic chainomatic balance, the Sookne-Harris Fiber Extensometer is a research instrument which produces an ink-drawn record of the load-elongation characteristics of almost any textile fiber. Recording is accomplished by a capillary-flow pen on ordinary graph paper. Several ranges of loads and rates of extension are provided. In addition to the load-elongation curve to the break, one or more hysteresis cycles can be readily obtained to permit the study of a fiber's ability to recover from extension. The machine records in a form suitable for the evaluation of the fundamental quantities obtainable from load-elongation curves, such as Young's Modulus, work required to elongate to a given extension, temporary set, etc. Relaxation curves, in which the rate of decay of tension at a constant elongation is studied, are likewise within the scope of the instrument. It is thus capable of providing detailed information of the time-load-extension properties of single fibers.

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RAYON DIVISION
Rome, Georgia

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POSITION WANTED—Superintendent of cotton yarn mill desires change. Will consider position as overseer of carding, spinning, twisting and winding. 18 years' experience in yarn manufacturing. Capable manager of help, familiar with production control, wage incentives, and time study. Finished high school and course in textile manufacturing. Write "Cotton Mill," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Superintendent or superintendent of large weaving room. Now employed as assistant superintendent. I. C. S. graduate in cotton manufacturing; age 39; experienced on 2 1/2's to 120's—also on both plain and fancy goods; good references furnished. Write "WFD," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as overseer carding; prefer first shift. Now employed but wish to make change. Graduate of I. C. S.; also Vocational Training School of Belmont, N. C. 22 years' experience as overseer on cotton, carded and combed yarns. 41 years old. Good references. Write "Graduate," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Job as Overseer of Weaving or Cloth Room; 30 years' experience; I. C. S. course; cotton classer; engineer. Sober, good habits. Will prove ability and worth. Write "WLB," P. O. Box 122, Malvern, Ark.

WANTED—Job on Barber-Colman spooling and warping; prefer brake type warpers with reset on top. Spoolers will not matter. Can furnish references. Strictly sober. 12 years' experience; prefer North or South Carolina. Write "Warper," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED—Engineering graduate; considerable experience time and motion study, job evaluation, labor and industrial relations, arbitration labor, contracts in textiles and related industries, desires change. Prefer South. Reply to "Job," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

POSITION WANTED as overseer. Nine years' experience as overseer and 15 years' experience in spinning room. Prefer South Carolina, North Carolina or Georgia. Will come on short notice. Sober and can furnish good references. Write "HARR," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED—Position as General Overseer. Experienced on carding, spinning, twisting, winding and finishing. Prefer Alabama or vicinity. Employed. Address "Alabama," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Well established firm of Australian commission agents with large clientele desires representation of rayon and cotton manufacturers and converters for dress, lingerie and furnishing materials.

Company's orders for American textiles last six months exceeded 1½ Million Dollars.

Principal visiting U. S. A. shortly.

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One who is familiar with quality lingerie. Give full information as to experience and other qualifications.

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Draper L Model Looms
(8/4s to 12/4s)

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Have 10-4x1 C&K Looms for commission weaving. 48 inches width in reed. 30 Harness Dobbys. Ideal for fancies and specialties.

Write: Box 826,
Kings Mountain, N. C.

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One new Ingersoll-Rand Compressor 10x7 single cylinder horizontal with vee sheave, unloader and lubricator.

One used, same as above and with motor, starter, after-cooler and air receiver.

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WANTED

Loom Fixers experienced on C. & K. Automatic S-5 and S-6 Looms for Central Pennsylvania Mill. Address all replies in writing to:

"Central," care Textile Bulletin,
P. O. Box 1225, Charlotte 1, N. C.

TWO OVERSEERS WANTED

One for Winding-Warping-Twisting Department. One for Carding Department.

Variety mill located in a large Southern city. Mill on Numbers 7's to 110's—Cottons, Spun Rayons and blends. Frequent changes in styles. Do not want overseers who make frequent job changes.

Write "Variety Mill," care Textile Bulletin,
P. O. Box 1225, Charlotte 1, N. C.

POSITIONS OPEN IN THE SOUTH.

Men Wanted—Overseer cotton and rayon weaving, \$100 week; overseer spooling, winding, warping and twisting, \$90 week; superintendent screen printing plant; braider foreman; foreman hosiery looping; electrical engineer, \$250-\$400 month, and many others.

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Over 45 years confidential Employment Service for Textile Mills

Finer Cloth BRINGS Faster Sales!

.. Both are YOURS
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➔ STRONGER YARNS

Superior lubrication.
Less fibre breakage.

➔ SMOOTHER YARNS

Retain moisture control
longer.
Aids artificial control.
Improve spinning.

➔ BETTER LUBRICATION

More even distribution.
Thorough penetration.

➔ FREE SCOURING

Decreased oxidation.
Less alkali increases
tensile strength.

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**BRETON
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LaGrange, Ga.

W. E. SMITH
Charlotte, N. C.

Problems Of High-Gear Production

(Continued from Page 29) for which we must be compensated. For too many years we have supplied something for nothing, or for almost nothing. We have been branded as a depressed industry and even lately as dispensable by those who would lower our tariffs and give our markets over to other lands in exchange for export markets for our consumer durables. But we learned in war that we were not dispensable, as our record of military supply shows. We have learned that we can operate on a better standard, pay better wages, pay a living price for our raw materials, and even make a little return on the investment in our plants. We think we have acquired the know-how to hold up our heads in the American economy, and to profit from the bitter lessons we learned between two wars.

There have been a great many who foresee a break in the continuity of good business which has been a hallmark of soft goods activities ever since we started arming this nation in 1940. Some have predicted a quick upset, others a minor recession, still others a depression, to occur in the second quarter of this year or thereabouts. Some have guessed at a recovery thereafter and long-term good business but others have said that we in soft goods are going to fight a losing battle, to keep the public buying shirts and sheets and house dresses, instead of spending all its income on automobiles and ice boxes and washing machines and quick-freeze units. With all these forecasts about, I hesitate to add positive predictions of my own knowing how greatly in error all flat-footed statements of future events will likely turn out.

I don't want to tell you that present prices are bound to stay at today's levels into the long future. We may grow a more adequate crop of cotton this summer. If so, the farmer will get just as many or more dollars by selling more bales at a lower price. The margin of profit in the industry as a whole is probably at its high point today. It likely will work its way down gradually over the next two or three years. I think it is fair to say that a year from now the prices of cotton goods may average lower than they are today but there should be no precipitate drop and in the meantime you have to do business and satisfy your customers. The only way you can do that is to start with an adequate stock, buy merchandise as it sells and by not piling up ungainly inventories, you will put back into use that good old word "turnover." Another reason why I believe the consumer may get less expensive cotton goods a year from now, is because about the same time our margins go down a bit, so will retail margins, but again it will be moderate and nothing drastic.

There are many market students who believe that in the meantime and due to this year's short crop we may get a raw cotton price squeeze this spring. We have just given another wage increase. Put these two factors together and you have a rather good looking near-term market.

In 1946 our foreign trade totaled about \$9,700,000,000. That was only fractionally less than in 1945 when Lend-Lease accounted for about 75 per cent of the shipments. Last year's commercial exports of close to \$8,000,000,000 was 140 per cent more than the similar 1938 figure. Imports rose to nearly five billion as against 4.135 in 1945. A great part of the world is eagerly awaiting the chance to get more American cotton textiles. Many goods that could tend to hinder this market will go out at fair prices to foreign coun-

tries. This is another very real reason why you cannot expect any violent decline in our prices.

Antique Textile Equipment Acquired By College

A valuable collection of antique textile equipment has been presented to the Clemson College textile department, Clemson, S. C., by John B. Humbert, manager of the Utica and Mohawk Mills, Inc., of Seneca. Announcement of the gift is made in the current issue of *Bobbin and Beaker*, Clemson student textile publication. The pieces include a hand loom, a rare combination textile machine, several spinning wheels, a reel, a warper, and a scale model of a bale presser.

The hand loom was made entirely by hand in 1860 by James Floyd of Liberty. It stands about 6½ feet high and is five feet long and five feet wide. The loom is made mostly of wood, the only metal parts being the ends of the warp beam. It was originally owned by Mrs. Nancy Boggs Taylor of Liberty.

The combination textile machine is one of three known to exist in the United States. It embodies the essentials of the cotton gin, opener, card and drawing frame. In operation, the cotton is fed into a hopper where a miniature gin removes most of the seed and trash. Unfortunately, a considerable amount of cotton is lost in this manner. The cotton is opened and then moved on to a small card. The small card sliver passes through miniature drafting rolls and is wound as a coarse yarn on small bobbins. The machine is so geared that all of its parts function merely by turning a single handle. It is believed to have been made early in the 19th century.

One small all-wooden spinning wheel was purchased by Mr. Humbert in a Blowing Rock, N. C., antique shop. It is reputed to date back to 1790. The model of the bale presser was made by a Mr. Miller of Abbeville County, S. C., about 1830. It is a reproduction of one of the earliest designed pressers.

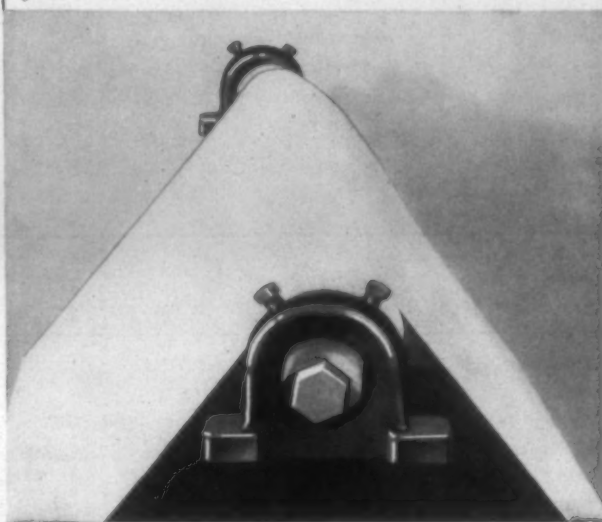
Research And Marketing Act Before Committee

Funds to activate research legislation hailed by U. S. farmers as the most important agricultural bill in the nation's history are being considered by the House subcommittee on agricultural appropriations in Washington. The bill, popularly known as the Research and Marketing Act of 1946, authorizes Federal expenditures of 19 million dollars for agricultural research during the coming year, with yearly increases until a 61 million dollar annual total is reached five years hence. Participating in the public hearings now under way are representatives of national farm organizations and of many farm commodity groups. They are urging appropriation of the full 19 million dollars as recommended by President Truman in his budget message and as anticipated by Congress when both houses passed the measure last year without a dissenting vote.

The National Cotton Council, prominent among participants in the hearings and closely identified with the research measure since its inception, is laying heavy emphasis upon the vital necessity for greater research on cotton, cottonseed and their products as a means of preserving the markets of the nation's largest industry.

The Council said that it is felt that whatever action is taken on the research bill will affect "the foundations of the cotton economy for years to come." It was emphasized

Mount Hope Free-Wheeling EXPANDER



All Widths Now Available

The free-wheeling idea of the Mount Hope Expander has proved so successful that we have now brought out a Heavy Duty type which can be used for all usual widths of cloth which are too wide or heavy for our Regular Duty type.

This expander has the same outside diameter of Neoprene sleeve as does the regular Free-Wheeling Expander, but has a 1½" axle instead of the 1⅞" axle now used. It can be furnished to accommodate medium or heavyweight fabrics up to 120" face, or lightweight fabrics, paper or film, of even greater face.

Other advantages of the Heavy Duty Expander, as well as the regular Free-Wheeling Expander, if used properly, are as follows:—

Because the warp is subjected to minimum tension less bow than usual is required, resulting in extra long life for the Neoprene surface of the expander.

Expanders may be set at any desired angle to the cloth to adjust the amount of widthwise stretch produced.

Ball bearings, grease packed, are securely mounted in steel spools to outlast many Neoprene sleeve coverings, and so designed that they cannot stick nor turn on the axle and cut it.

These Expanders are suitable for all fabrics from rayon marquisette to tire cord and also for plastic film and paper.

MOUNT HOPE MACHINERY CO.

42 Adams St., Taunton, Mass.

Representatives — John H. Andresen, Inc., 138 Grand St., Paterson, N. J.; Ingalls Engineering Co., 1214 Union Trust Bldg., Providence, R. I.; Slaughter Machinery Co., Charlotte 1, N. C.; Sidney Springer, 316 East Commercial Street, Los Angeles 12, California; W. J. Westaway Co., Ltd., Hamilton and Montreal 3, Canada.

that failure to start now the research program which has been authorized may cripple tragically the chances for adequate cotton and agricultural research in future years. "If the appropriation is made, the additional research that cotton needs can be started promptly," the council said. "Plans have been made for the beginning of research expansion that will keep cotton permanently abreast of its competitors in technical progress."

New Process For Laundering Rayons Announced

An improved job on rayons and other synthetic fabrics is claimed for a new laundering technique described by the American Institute of Laundering, Joliet, Ill., in a report to its members. Pre-conditioning of the fabrics by means of warm, moist air before pressing is the basis of the process, the report explains. The process was developed at the institute's laboratories under a research fellowship of the Celanese Corp. of America. The process, says the report, helps to eliminate the glazed appearance sometimes seen in garments made of synthetic fabrics after pressing.

The pre-conditioning is accomplished by a modification of the laundry's drying process and serves to dry the garments by stages, the report explains. In a laundry, garments are sometimes dried by means of drafts of warm, dry air in what the laundry calls a tumbler. In the new process, moisture is drawn into the tumbler along with the warm air. After removal from the tumbler, the garments are allowed to condition for an hour before pressing. They are then finished on the regular laundry press, being pressed and brought to complete dryness at the same time.

Textile Industry Pays \$256,000 Back Wages

The 1946 annual report of the wage and hour and public contracts division, U. S. Department of Labor, shows that violations of the minimum wage, overtime and child labor provisions of the Fair Labor Standards Act and the Public Contracts Act were found in 54 per cent of the 1,000 inspections made in the textile manufacturing industry during the year ended June 30, 1946. As a result, \$256,000 in back wages was returned to some 15,300 underpaid employees. Not all textile manufacturers were inspected during the year, because the divisions are able to make complaint, selective and spot-check investigations in only a part of the nation's establishments in all industries covered by the two laws. However, the inspections in the textile manufacturing industry were sufficient to show that employers in this field still are in rather widespread violation, despite the fact that the vast majority apparently desire to comply, with only a small number of so-called chiselers remaining in industry as a whole.

The report further shows that violations of the overtime provisions of the two laws were the most common type found. It also was revealed that 11 per cent of the inspected employers in the textile manufacturing industry had violated the minimum wage provisions of the Fair Labor Standards Act—the Wage and Hour Law. Back wages for violations of the 40-cents-an-hour minimum wage provision of this law—failure to pay \$16 a week for a 40-hour week—were paid to more than 2,200 employees.

The divisions report a frequent cause of unintentional violations is misapplication by employers of the exemption

NEW ENGLAND WASTE CO.

BOSTON OFFICE

now located at

909 PARK SQUARE BUILDING

BOSTON 16, MASSACHUSETTS

provisions of the Wage and Hour Law, under which certain employees may be exempt from the law's minimum wage and overtime provisions as executive, administrative or professional employees. As most manufacturers know, the Wage and Hour Law applies to all employees engaged in interstate commerce or in the production of goods for interstate commerce, and the law's provisions for a 40-cents-an-hour minimum wage and time and one-half for overtime work beyond 40 hours a week apply in all cases unless an employee is specifically exempt. The Public Contracts Act applies generally to employees engaged in filling government contracts for over \$10,000. William R. McComb, recently named administrator of the divisions, advises that the divisions, through their regional offices, aid employers who are uncertain about the application of the laws to their employees. Regional offices of the divisions are located in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Birmingham, Nashville; Chicago, Minneapolis, Kansas City, Dallas and San Francisco.

American Woolen Co. Sets First Export Deal

American Woolen Co., with main offices at 225 Fourth Avenue, New York City, producer of woolen textiles, has entered into an exporting agreement with Drake America Corp., 15 Broad Street, New York City. This is the first arrangement for foreign sales representation ever made by American Woolen. The Drake America Corp., which has its own sales agencies and special operatives throughout the world will be sole export representative of all types of American Woolen's goods. Drake America Corp. was founded for export and import trade by a prominent English banking group.

The decision to begin exporting was made by Moses Pendleton, president of American Woolen Co., and his associates after careful survey of the domestic and foreign textile markets. It is expected that this arrangement will enable the firm to maintain a high level of production under peacetime conditions and that it will fit in with American Woolen's plans for expansion. Thus, with a backlog of about \$75,000,000 worth of orders, the American Woolen Co., which last year reached gross sales in excess of \$170,000,000, will put into immediate effect its plan to build up outlets for its products abroad.

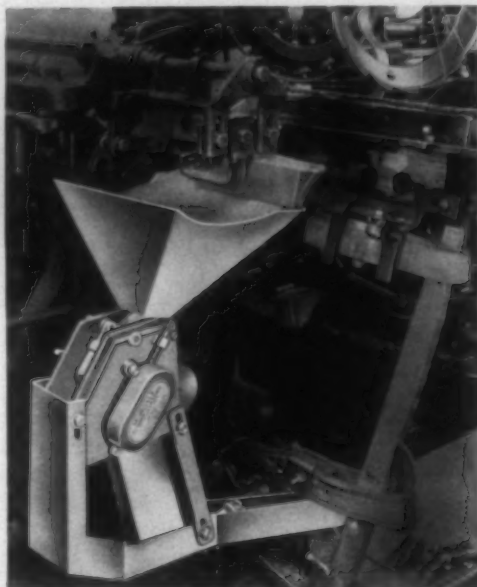
The percentage of American Woolen's production to be set aside for the export trade at this time is yet to be determined. The outgoing ratio of total sales will be increased as domestic consumption makes possible greater quotas for shipping. Drake America Corp. is associated in this deal with Berglas Bros., recognized world-wide woolen textile specialists. The affiliation between Drake America and Berglas Bros. gives the new American Woolen export set-up an imposing international scope.

Gather Material On German Fiber Industry

Dr. Walter J. Wyatt of the National Bureau of Standards is in Germany to examine and co-ordinate documentary materials on the German staple fiber industry for the Office of Technical Services, the Department of Commerce announced April 14. During his visit to Germany, Dr. Wyatt will also study German synthetic asbestos processes.

Dr. Wyatt is executive officer of the textile section of O. T. S.' technical industrial intelligence division, combining this work with his regular duties as textile technologist

New! BUT THOROUGHLY
MILL-TESTED*



THE "NO WORRY" MORDALE BOBBIN CLEANER

(PATENTED)

A PRODUCT OF E. GORDON WHITELEY
MORLEY, ENGLAND

Can be easily fitted to most types of Automatic
Bobbin Changing Looms.

Needs minimum attention.

Will strip efficiently any kind of yarn.

Does not damage bobbins.

Segregation of yarn at the loom.

Enables you to have a much smaller stock of
bobbins for your weaving shed.

*Over 1,000 Units Already Delivered

■ ■ ■

Exclusive Southern Agent

OLIVER D. LANDIS
718 QUEENS ROAD • CHARLOTTE 4, N. C.

of N. B. S. He has worked closely with the American textile industry in recruiting experts to make first-hand investigations of German technological developments and has helped prepare and distribute the reports of investigations and microfilmed documents concerning the German fiber industry. He has also arranged for examination of German fiber machinery by American industry and the National Bureau of Standards.

Dr. Wyatt plans to examine and co-ordinate over 25,000 microfilmed items and a number of reports prepared by American experts on staple fiber machinery developed by the Germans. The co-ordinated materials and reports will later be released to the public through O. T. S.

Cotton Council Studies Laminate Industry

The plastic laminate industry, which increased its production tenfold between 1939 and 1943, appears to be headed for tremendous new expansion which depends mainly upon the success of filler manufacturers in meeting the challenge. A number of supplier interests are headed for the pier to catch this boat, which promises to sail without those who do not run for it. In the race already—some sprinting, some hobbling—are a number of basic competitors: cotton, paper, fiberglass, asbestos, the synthetic fibers, and wood. The prizes are orders for millions upon millions of pounds of these materials, to be wedded to man-made resins and shaped into an ever-lengthening list of products. These products are pushing aggressively into markets hitherto held by metals, linoleum, plywood, tile, lumber, sheet glass and decorative stone.

The National Cotton Council, aware of the vast potential

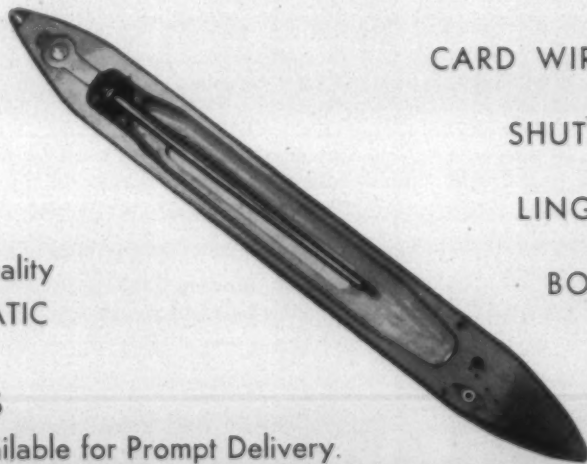
of this market, and its great opportunities for cotton, has completed a study of the laminate industry—a study that shows that the race for this burgeoning market will go to the swift, while the other competitors are likely to be trampled underfoot. The supremacy gained by any one filler in the plastic laminate industry of the near future will be a hard thing to shake loose, for, once tooled up to handle one type of filler, a manufacturer will require great persuasion before he converts his plant to the techniques required for another.

Two great problems face cotton manufacturers who wish to hold and enlarge their markets in the laminating field: the reduction of fabric costs, and the better adaptation of fabrics to laminate manufacture. One great advantage accrues to the cotton men: cotton fabrics are superior to other fillers in a large proportion of laminate uses.

The council's survey shows that the demand for cotton for laminating will be between 50 million and 64 million pounds, with a potential demand which may reach 150 million pounds annually in the future. The difference between the expected and the potential demands represents those uses in which cotton is preferred, but in which its superiority is not sufficient to offset the current price differential over competing fillers, especially paper. A decrease in price would be more influential in gaining this market than an increase in cotton's superiority.

From 1939 to 1943, the dollar value of laminates of all kinds increased from 13 million to more than 70 million. The weight of cotton used in laminates increased even more sharply—from less than five million pounds to more than 50 million. The disproportionate increase was due to the

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fact that, while pre-war high pressure laminates used 30 per cent cotton fiber and 70 per cent paper, the specifications for war production just reversed these figures.

After the war the total volume of high pressure laminates dropped off to about 52 million dollars in 1945, and the percentage of cotton filler fell to about 50 per cent of the total. This figure is still falling, and is estimated to be approaching 30 per cent. The drop in the percentage of cotton for filler has not resulted from its comparative usefulness in laminates. The reason for the drop is quickly apparent in the cost of cotton laminating fabrics—70 to 90 cents a pound—as compared to costs of alpha and rag paper—20 cents—and draft paper—seven cents.

Complicating the picture further has been the pronounced trend between integration of textile manufacturing units, which has diverted established supplies of cloth from laminators. Government limitations on textile manufacture were another factor.

Necessary price reductions on cotton fabrics may be accomplished through the development of simpler constructions such as unwoven webs. Both theory and preliminary tests indicate that if webs can be supplied in suitable forms, cotton fillers can be made available at lower prices, and, for many purposes, give superior laminates.

The purchase price of cotton filler is not the only cost factor which troubles laminators. They have extensive difficulties with sizing, and they hope that technical co-operation between their own researchers and those of the cotton industry can solve this problem. Sizing in fabric interferes with the resin impregnation, and the laminators must therefore remove the sizing at a cost which sometimes reaches 25 per cent of the basic price of the fabric. Laminators would like to see size developed that either will not interfere with the resins, or which is compatible with them to form part of the bonding strength. The laminators would also like to see yarns and weaves developed especially for laminating, to produce improved bonding and impact strength, water resistance, electrical characteristics and toughness.

The National Cotton Council's survey points out that, in entering new fields, such as the substitution of laminates for wood or metals, consumer acceptance must be obtained. The extra sales promotional effort to secure public confidence in the new product represents considerable expense. The council's report recommends—in the light of cotton's present and potential position in this big new field of laminates—a four-fold approach. It proposes studies be made on sizing, web constructions, resin-fiber bond, and the effect of fabric constructions on laminate quality. It recommends the enlistment of increased co-operation from representatives of the laminate industry, preferably through their regular societies.

It suggests the establishment of a clearing house to assist industrial users of cotton to locate mills currently making products of useful types. It proposes the application of standard public relations techniques, to assure industrial users of cotton that they are considered a valued and permanent market. Through a unified and vigorous program cotton can prevent itself from missing the laminates boat which is already getting up steam for vast production.

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it was announced April 10. The fabric does not depend upon elastic yarn or rubber thread for its elasticity. During its manufacture, specially designed fabrics are condensed to shorter lengths, spread with natural rubber latex, dried and cured. The degree of stretch is accurately controlled by this process. Stretch can be made to vary from 50 to 150 per cent the length of the material.

The new elastic fabric is known as Kuron. It can be produced 36 inches wide and in a range of colors, weights and designs. It can be made of rayon and wool, rayon and cotton, two different rayons, two different cottons or of only one fabric. It is said to be long-wearing and to keep its elasticity after many washings. Uses developed include upholstery, shoes, sport clothes, girdles, swim suits and baby pants.

March Shipments Of Rayon Show Increase

Domestic shipments of rayon in March totaled 78,200,000 pounds, four per cent over the corresponding month last year, according to the *Rayon Organon*, statistical publication of the Textile Economics Bureau, in its April issue. For the first three months of the year, rayon deliveries totaled 224,900,000 pounds, eight per cent more than was shipped in the same period in 1946. March filament yarn shipments amounted to 62,700,000 pounds (44,900,000 pounds of viscose-cupra and 17,800,000 pounds of acetate), and staple shipments totaled 15,500,000 pounds (11,300,000 pounds of viscose and 4,200,000 pounds of acetate).

Annual production of rayon, nylon and silk and related broad woven fabrics during 1946 reached a new record total of 1,811,000,000 yards, exceeding the previous peak in 1944 by seven per cent and the 1939 output by 29 per cent. The output of 100 per cent spun rayon fabrics exceeded the 1945 total by 17 per cent and the 1939 output by 71½ per cent. Production of 100 per cent rayon filament yarn fabrics showed only a small increase over 1945 and was 15 per cent below the record 1941 output. Output of filament and spun rayon fabrics during 1946 was eight per cent over the previous year and 7½ times the 1939 output. Production of rayon mixtures and blends were 65 per cent above 1945 and three times that of 1939, while the output of velvets, upholstery and tie fabrics was 44 per cent over 1945 and slightly over 1939.

Silk goods production during 1946 was 9,000,000 yards, considerably greater than in the 1943-45 period but only a fraction of pre-war levels. Nylon, fiberglass and related fabric production during 1946 amounted to 53,000,000 yards which, while not as great a volume as was produced during the latter years of the war, nevertheless enabled the civilian consumer to obtain them, some for the first time. Tire fabric and cord output during 1946 reached a new high level of 522,000,000 pounds, and this unprecedented total was 14 per cent above the 1945 figure, according to the *Organon*. Cotton tire fabric production amounted to 236,000,000 pounds, surpassing 1945 and 1939 levels by 11 and 45 per cent, respectively. Cotton tire cord production, amounting to 74,000,000 pounds, exceeded 1945 output by 15 per cent, but was 24 per cent below that of 1939. The 1946 output of rayon and nylon tire fabric and cord reached a record figure of 212,000,000 pounds, exceeding the 1945 production by 16½ per cent and about 24 times the 1939 output level. In this category, the fiber used is predominantly rayon, with nylon only in nominal use. Of

the total 1946 tire fabric and cord production, 41 per cent was rayon and 59 per cent cotton.

Compilation of current rayon weaving data by the *Organon* reveal that the weekly production of rayon, nylon, silk and related broad woven gray goods in the four-week period ended Feb. 28, averaged 38,600,000 yards, a new peak level. The weekly rate of output exceeded that of January by five per cent and was nine per cent over the February, 1946, operating rate. Gray goods stocks in the hands of weavers at the end of February were placed at 35,800,000 yards, showing little change from the January level, but $7\frac{1}{2}$ per cent over February, 1946.

According to a new world directory of rayon producers, prepared by the *Organon* and believed to be the first post-war listing of its kind, 29 countries are now producing rayon, three more than in 1939. When new plants are completed in Australia, Bulgaria, China, Cuba, Egypt, India, Palestine and Venezuela, there will be 37 rayon producing countries in the world. The *Organon* notes that the present status of the rayon industry in the Soviet Union, as well as those areas under the direct control of Russia, is not known, and therefore the directory shows the available pre-war information.

Prior to the war, the Russian rayon industry presumably was made up of five plants. While current condition is unknown, it is believed that most of them were either destroyed or heavily damaged during the war. The Soviet Union, however, acquired the rayon plant of the Finnish firm, Kuitu Osakeyhtio, when Finland ceded the Karelian Isthmus to Russia in 1944. Following the victory over Germany, Russia had access to 15 German rayon plants located in the areas now under Russian and Polish administration. The extent of destruction, or definite information concerning the number dismantled and moved to Russian territory, is not known, but a recent Russian announcement that 14 new or restored rayon plants are being planned, indicates that some German rayon equipment has already been shipped to Russia. Two Korean rayon plants and one in Manchuria also came under Russian control with the end of the war and it is presumed that Russia will regard these as a part of the reparations due her from Japan.

In the eastern part of Germany, judging from the pre-war location, there were four German rayon plants in the area now under Polish administration. One of these, the former Vereinigte Glanzstoffabriken unit at Breslau-Cavalen is being operated under the name Fabrika Sztucznego Jedwabiu, Wroclawiu.

Reliable data are available on the German rayon industry in the American, British and French zones of occupation, and reports indicate that there are six in the American zone, seven in the British zone, and five in the French zone.

The Japanese rayon industry today is made up of 16 operable plants, of which 15 are privately owned and one is government owned. This compares with 47 Japanese plants in 1939. The *Organon* reports that according to opinions expressed in Army circles, it will be necessary to encourage the Japanese rayon industry to resume large scale production to quickly develop a self-sustaining Japanese economy.

Corncobs and Hulls Into Furfural Into Nylon

Development of a chemical process to use such agricultural by-products as corncobs, cottonseed hulls and the



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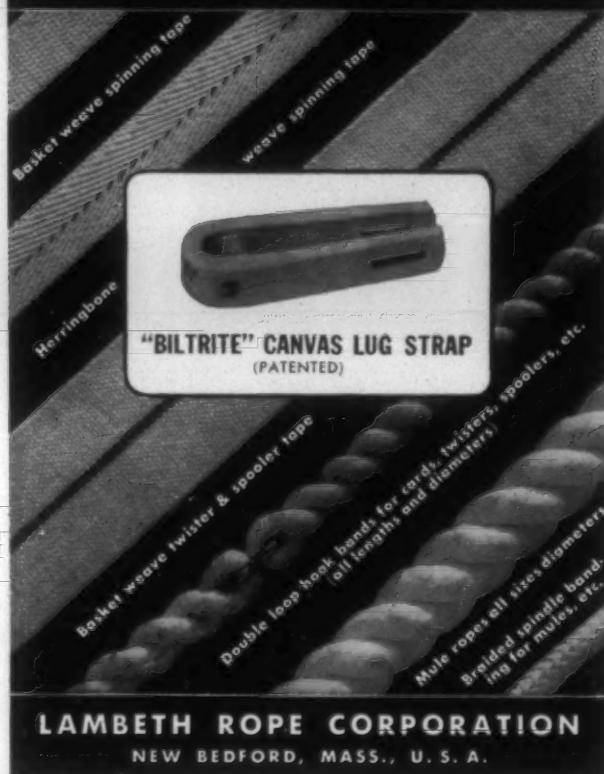
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hulls or bran of oats and rice in the making of nylon was disclosed by E. I. du Pont de Nemours & Co. at a meeting of the National Farm Chemurgic Council at Oklahoma City, Okla. The cobs, hulls, and other cellulosic materials are the sources of a chemical known as furfural. The new process turns furfural into adiponitrile, a chemical important in making nylon. A new unit will be built at the Du Pont electrochemicals department plant at Niagara Falls to produce the chemical.

Discussing the new process publicly for the first time, Dr. Oliver W. Cass, who headed a research team that worked on the project at the Niagara Falls laboratories, and the development, from the first small-scale laboratory experiments to the large semi-works units which can produce tons of adiponitrile from furfural, cost Du Pont about 12 years' time and approximately \$1,000,000.

Nylon is now derived from the components of coal air, and water. But, between the starting materials and the finished product, there are long, complicated, and expensive chemical and manufacturing processes. Du Pont research men have found that natural gas and petroleum also provide basic raw materials. The new process is a further step in diversification of sources of nylon ingredients. However, it was emphasized that the use of agricultural by-products, as a starting material, would not necessarily bring a reduction of manufacturing costs in the near future. It was pointed out that this new process makes it possible to use a replaceable source for one of the basic chemicals needed for nylon. Coal and petroleum are irreplaceable resources.

Furfural has been used in chemical processes for 25 years, but it is little known to the layman. It is a tan-colored liquid with a faint bitter-almond odor. A rare chemical 30 years ago, it is now used in refining petroleum lubricants, butadiene for synthetic rubber, wood rosin, and vegetable oils.

In making furfural, the hulls or cobs are pressure-cooked with a weak acid. Then follows a complicated purification process. Next, there is a most exacting and complicated processing which includes reactions of furfural with steam, gases, and various other chemicals. The result is adiponitrile. This is further processed into hexamethylene diamine in another Du Pont plant at Belle, W. Va., and then reacted with adipic acid to produce nylon "salt," which looks much like table salt.

Mechanization Of Cotton Farming Urged

Mechanization of cotton farming will bring the South an agricultural revolution which promises to provide an answer to the keen competition of cheaper synthetic materials. This prediction was made in New Orleans, La., April 4 by three speakers before the session of the National Cotton Compress and Cotton Warehouse Association: S. R. Nichols, Des Ark, Ark., association president; Ed Lipscomb, promotion director of the National Cotton Council; and Clayton Rand, Gulfport, Miss., author and publisher.

"For cotton to keep itself competitive in price it must reduce production and processing costs all along the line," Lipscomb said. "Mechanization offers the greatest hope for cost reduction at the farm level, particularly in the chopping and harvesting processes. In delta areas approximately 160 man hours are required for a man with a mule to plant, cultivate and harvest an acre of cotton. Only 30 man-hours per acre are required under full mechanization." Rand said the mechanical cotton picker will transform "the agricul-

tural economy of the Deep South in our generation. With mechanization, other changes will follow in the diversification of crops. No part of the nation can compete with an agricultural South completely mechanized."

Want Wool Freight Rates Equalized

The American Cotton Manufacturers Association and four similar state groups from North Carolina, South Carolina, Georgia and Alabama informed the Interstate Commerce Commission April 1 that the level of rates and minimum weights I. C. C. eventually prescribes for scoured wool and wool tops should be the same to consuming points in both Southern and "official" territory.

Supporting proposals to reduce freight rates on shipments of domestic wool to equal those in effect for Australian wool, they said such uniform rates generally would not produce charges as low to Southern textile manufacturers using scoured wool or wool tops as a raw material, as those to competitive manufacturers in Eastern and New England states. They also urged I. C. C. to formulate uniform rates covering wool in the grease as to level and minimum weights on traffic to points in Southern territory and for corresponding distances to points in official territory.

Textile Exposition Set For Spring, 1948

Spacious Textile Hall in Greenville, S. C., will be the scene of the 15th Southern Textile Exposition to be held in the spring of 1948, it was decided at a meeting of the executive committee of the board of directors of the hall recently. The textile exposition was postponed last year at the request of a committee of exhibitors because of the housing shortage and other wartime conditions still prevailing at that time. The committee revealed, however, that "through the co-operation of the hotels, lodging houses and private homes in Greenville and surrounding towns, the housing problem for visitors may be successfully solved next spring."

The exposition, which was founded 30 years ago, runs for one week and has always created tremendous interest in textile circles. It has been credited largely for the development and expansion of the textile industry in the South, since it brings together leaders in every phase of the industry who are provided with opportunity to examine and discuss the newest devices and latest improvements in machinery and processes. Members of the exposition committee are Edwin Howard, chairman; S. M. Beattie, W. W. Carter, C. E. Hatch, Sr., Alan B. Sibley, Harold R. Turner and William G. Sirtine.

A. A. T. C. C. Groups Hold Spring Meetings

The South Central and Piedmont sections of the American Association of Textile Chemists and Colorists convened for their spring meetings on April 12 at Chattanooga, Tenn., and Greensboro, N. C., respectively. At the meeting of the South Central Section in Chattanooga, Henry E. Millson, director of the application laboratory of Calco Chemical Division, American Cyanamid Co., discussed progress made in the study of causes of crocking, stressing especially the work of his laboratory in connection with wool, rayon and cotton fibers. "It has been found," he said, "that materials which crock excessively do so because a portion of the dye is deposited on the surfaces of the

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fibers rather than penetrating into them. When dyes are inside fibers, they do not crock excessively." A. J. Kelly of Burkart-Schier Chemical Co. was elected counsellor of the section to succeed William Reid, Trion, Ga., resigned because of his transfer from the region. The South Central Section will hold its next meeting June 7 in Chattanooga.

The problem of a dwindling water supply for industries and municipalities in the United States and the possible solution of this problem by reuse of water following purification with ion exchange resins was discussed at the meeting of the Piedmont Section of the A. A. T. C. C. in Greensboro by M. C. Welker of the American Cyanamid Co., New York. Mr. Welker said several parts of the nation have almost exhausted their watersheds through industrial use of water and referred in particular to Ann Arbor, Mich., and Corpus Christi, Tex. Ion exchange resins, he added, can be utilized in purifying the water used by industrial plants, which may then reuse the same water indefinitely. The resins soften water, he said, give better penetration, and result in more level and better shades in dyeing, since improved shades come from better solubilization of the dye by the resins.

Wool Group Recommends Commodity Study

The Department of Agriculture announces that the International Wool Study Group, meeting in London since March 31, on April 3 issued the following statement: During the past week, representatives of Australia, Argentina, Belgium, Canada, Cuba, Czechoslovakia, Finland, France, Iceland, Mexico, Italy, Netherlands, New Zealand, Paraguay, Peru, Poland, South Africa, Switzerland, Turkey, United Kingdom, Uruguay, United States of America and Yugoslavia, together with observers from the United Nations, the Food and Agriculture Organization and U.K./Dominion Wool Disposal, Ltd., have participated in the first meeting of the wool study group.

The principal objects of the meeting have been: (1) to consider the organization of the study group; (2) to review the world wool situation in the light of the changes since the International Wool Conference was held in London in November, 1946, and (3) to exchange information about domestic wool problems and policies. The study group has adopted terms of reference, of which the principal features are that membership should be open to all countries substantially interested in the production, consumption or trade in wool; that the group shall have the responsibility for considering possible solutions to any problems or difficulties which are unlikely to be resolved by the ordinary development of world trade in wool, and that the group shall arrange for any necessary collation or collection of statistics, using for this purpose existing sources so far as practicable.

The present review indicates that the 5,000 million pounds in stock on June 13, 1946, were about equally divided between governmental organizations and commercial holdings, whilst a year later the total estimated stocks of about 4,500 million pounds are expected, on the basis of present conditions, to be held about 55 per cent commercially. These stock figures compare with total estimated production in 1946-47 of 2,905 million pounds the total estimated consumption of 3,395 million pounds. It is apparent that total stocks of wool remain very large, in spite of the achievement of a very high level of consumption during 1946-47. The International Wool Conference

last November concluded that the absorption of stocks into final consumption, alongside the new clips of 1946-47 and later seasons, must still present a formidable problem. No material change in this respect can be recorded. Bearing in mind the desirability of the co-ordination of national wool policies the study group has invited the participating governments to consider further the question of special studies regarding such co-ordination.

The United States delegation in the Wool Study Group is headed by L. A. Wheeler, director, Office of Foreign Agricultural Relations, U. S. Department of Agriculture. Other members are: D. D. Kennedy, State Department; R. B. Schwenger and R. J. Ives, Department of Agriculture; and P. O. Nyhus, agricultural attache, U. S. Embassy, London.

American policies, it was agreed by the wool experts of 25 nations attending, may have a profound bearing on the world situation. The American government, through the Commodity Credit Corp., holds more than 450,000,000 pounds of wool. Selling it at current prices, as is advocated by some American agricultural leaders, could demoralize markets of other lands.

Wool production in 1946-47 was estimated at 2,905,000,000 pounds, while consumption was expected to be 3,395,000,000. Australian delegates reported the 1946-47 wool clip in their country will be about 1,000,000,000 pounds, somewhat less than the peak production of recent years. Australian wool is being sold readily at prices which delegates regarded fair. Argentine delegates reported that the clip this year will be about 310,000,000 pounds. The South African clip will be 190,000,000 pounds.

Help Revive West German Textile Industry

Revival of the textile industry in western Germany has been boosted recently by the importation of more than 50,000 tons of American cotton and United States and British authorities are planning an expansion of this program to boost dollar exports of their combined occupation zone. Sidney Scheuer, special representative of the U. S. War Department who recently completed a series of conferences with American and British Military Government economics officials in Germany, had high praise for the self-liquidation program for the importation of American cotton. This program, whose original contract called for the importation of 55,000 tons of American raw cotton to be processed in mills in the U. S. occupation zone, provides that a maximum of 60 per cent of the finished textiles be devoted to exports to raise dollar credits to pay for the cotton and contribute to paying the bill for food and other vital imports for Germany. The remaining 40 per cent of products are left for the German consumers.

Dr. Harris Appointed Textile Seminar Leader

Dr. Milton Harris, one of the nation's foremost scientists in the field of industrial research, has been appointed seminar leader for the National Textile Seminar, to be held at Shawnee-On-Delaware, near Stroudsburg, Pa., May 12-16. Announcement of the appointment was made recently by Dean Richard S. Cox of the Philadelphia Textile Institute, which is sponsoring the seminar.

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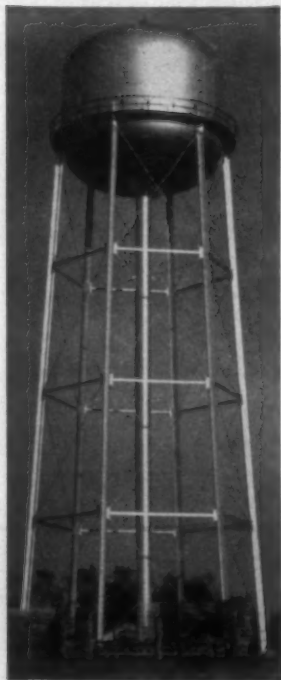
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will be presented and all phases of the industry's problems discussed.

Dr. Harris, director of research, Milton Harris Associates, Washington, D. C., will preside at each of the seminar sessions and introduce the topic developers. He is a graduate of Oregon State College, the University of Washington and Yale University, from which he received his Ph.D. degree in 1929. During the war, Dr. Harris served as a member of the advisory board to the Office of the Quartermaster General, secretary to the committee on clothing of the National Research Council, member of the sub-committee on wood and plastics for the National Advisory Council for Aeronautics, and chairman of the Wool Conservation Board. He developed a non-shrinkable woolen sock for the Army which was in field use at the end of the war.

The Philadelphia Textile Institute, which sponsors the annual seminars, is the oldest and most comprehensive textile college in the United States. It is co-educational and offers both day and evening courses. The four-year day courses lead to the degree of B.S. in Textile Engineering. Recently the Philadelphia Textile Institute Foundation, a non-profit corporation established to raise and administer funds for the institute, acquired a 12½-acre estate at Schoolhouse Lane and Henry Avenue, Germantown, where it is planned to erect a new school, with greatly increased facilities and an expanded student body. Edward H. Rakestraw, president of Hyde, Rakestraw Co., manufacturer and distributor of cotton yarns, is chairman of the foundation's fund raising activities.

Lewis B. Schwellenbach, secretary, U. S. Department of Labor, will be one of the principal speakers at the seminar. Secretary Schwellenbach will address the session on industrial relations the evening of May 15. Three other speakers listed are William D. Fales, head of the Rhode Island School of Design, who will discuss the importance of textile education to the expansion plans of the American textile industry, and Dr. George H. Brown, research engineer of Radio Corp. of America, who will speak May 16 on the application of electronics to the textile industry. Royal Little, president of Textron, Inc., will also speak and his subject is expected to be verticalization in the textile industry.

Commission Reduces Limit In Cotton Futures

The U. S. Department of Agriculture April 3 issued the following statement: The Commodity Exchange Commission has reduced the limit on speculative positions in cotton futures from 30,000 bales in any one future to 30,000 bales in any one future or in all futures combined on any one market. There are seven active futures. Reduction in limits on speculative positions in cotton futures was proposed last winter in public hearing before the commission, which is composed of the Secretary of Agriculture, the Secretary of Commerce, and the Attorney General. The new regulation, as others issued under the Commodity Exchange Act, will be administered by the Commodity Exchange Authority of the department.

The new limit applies to net positions, long or short, and becomes effective May 10. The commission made no change in the limit on daily speculative purchases and sales. The commission declared that the existing limit of 30,000 bales per future on daily purchases or sales is a reasonable limit, rendering any change unnecessary. The new limit on speculative holdings in cotton futures does not apply to bona

fide hedging positions. With respect to straddle positions, the limit applies to the delivery month only. The decision was issued as an amendment to an order of the Commodity Exchange Commission of Aug. 26, 1940. According to the order, limits established by the commission do not affect provisions of the Commodity Exchange Act relating to manipulation and corners, nor relieve any contract market of its responsibility under the act to prevent manipulation and corners.

Bureau Testing Fabrics For Water Resistance

The textile section of the National Bureau of Standards announced April 14 that it is conducting a series of studies on the general problem of water repellent textiles with the ultimate aim of developing standard testing methods leading to generally comparable data on the subject and to answer some of the more common questions arising from government agencies, industry and the general public—such as, to what degree is a particular fabric water repellent, or to what extent does dry cleaning or laundering diminish water repellency of a fabric. Results of this work will point the way toward further improvements in water repellent fabrics, particularly through a comprehensive study of fabric structure as it applies to water repellency, it is declared. This phase of the investigation is continuing, as well as additional study of test procedures adaptable to other fabrics and suitable for establishing standard methods of testing for commercial and government use.

Rayons Permanently Stabilized By New Method

Viscose rayons are now being permanently stabilized by a method developed by Cluett, Peabody & Co. of New York, it was announced recently by company officials. The permanent stabilization is accomplished by a method technically known as the BR-I Rayon Stabilization Process, for which patents are pending. Commercial finishers using this process have already begun to turn out viscose rayons permanently stabilized. The company is licensing the use of its trademark Sanforset on rayons which meet its standard of stabilization. Use of the trademark will be permitted only when regular checks by Cluett, Peabody show maintenance of rayon fabric shrinkage or stretching within the two per cent standard established by the trademark owner.

"Our new stabilizing process," stated John C. Turrell, managing director of this division of the company, "is the result of continuous research in the laboratory and in finishing plants since before World War II. Our first licensees are now in production and Sanforset stabilized fabrics will be available for many fall lines. In our opinion, it will open many new markets for rayon merchandise. Consider, for example, the rayon wearing apparel field. Up to now, most rayon wearing apparel has had to be dry cleaned. This is expensive and costs far more than washing. In addition, there are many communities in this country that lack dry cleaning facilities and, thus, the use of rayon merchandise is discouraged. Now, however, a Sanforset label on a dress, slip, pajamas or men's shirt will mean that the article can go into the washtub and still come out the same size as when it went in.

"Ironing, too, will be easier. Housewives will not have to go through the difficult routine now required to iron rayon. For Sanforset fabrics remain as they were before washing. There'll be no more of the discouraging stretch-

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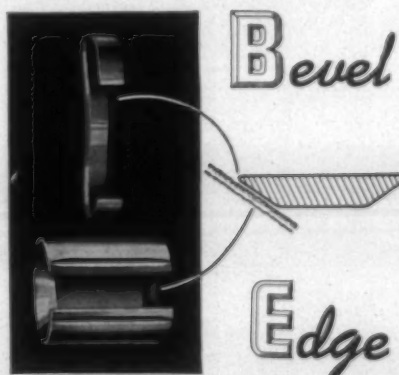
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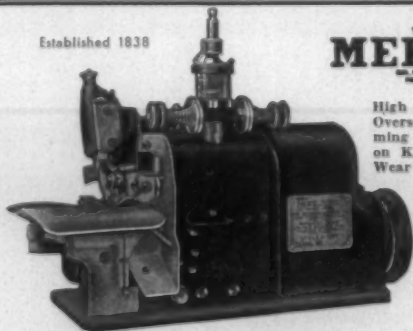
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Housewives who were asked to test fabrics that met the Sanforset standard reported the garments were washable, dried faster and ironed easier than rayon fabrics not stabilized by the new process. These housewives were selected on a scientific basis so that they represented various income brackets and all geographic sections of the country. The garments were accurately tested before and after multiple washings. "We sent 577 garments—consisting of men's pajamas, men's sports and business shirts, women's pajamas, blouses and blitzies, and boys' shirts—to 577 homes for testing," explained Mr. Turrell. "None of the garments was labelled. But all had been made from fabrics that met the Sanforset standard. Four hundred and seventy-four of the women who tested and returned these garments sent in laundering reports and 94 per cent of them volunteered favorable comment. The garments were washed in water of varying temperatures, by hand or in machines, a variety of soaps were used, and the temperature of the irons ranged from warm to hot. Yet virtually every one said the garments were as good after as before many washings and ironings."

The results achieved by the BR-I process of stabilization are permanent, it was stated, because there is nothing introduced into the fabric to wash out. The hand of the fabric is not changed and any desired finish may be obtained. It also is easier to handle on the cutting table. Multiple laundering tests, according to Mr. Turrell, proved that the wash durability of the stabilized fabrics was actually greater than that of untreated fabrics. There is no need to baby the treated garment in washing and it will retain its original fit whether washed at 100 or 212° F.

"From the day rayon was introduced," explained Mr. Turrell, "it was recognized as a great fabric, but it had faults. It shrunk and it stretched. We began experimenting on stabilizing viscose rayon before World War II. We knew that viscose fabrics have a large amount of potential shrinkage. They absorb tremendous amounts of moisture and swell more than 50 per cent when wet with water. They shrink because of the stretch imparted to the warp yarns during warping, slashing, weaving and wet finishing. We investigated surface finishes—that is, finishes which are applied to a fabric but are incapable of penetrating the fibers. We found such finishes just wouldn't hold up under multiple washings. Then we studied internal fiber finishes. But we found that with this type of finish the amount of shrinkage varied with the temperature of the water. We also discovered that some picked up chlorine in the wash."

"We finally came to the conclusion that the only satisfactory stabilizing treatments are what may be described as permanent chemical treatments. We believe these are the most satisfactory because the effect is truly permanent. The hand and texture are unchanged. And, with the proper type of process, no undesirable properties are introduced into the fabric. After studying many chemicals, we discovered glyoxal has the greatest possibilities. With glyoxal we made 2,000 experiments, filled 80 volumes with findings, and made 110 separate commercial runs. We ran two plants six weeks to make sure we had it. Everything checked. Thousands of wash tests proved that this new process per-

manently stabilized viscose rayons to a tolerance of two per cent. So we set tolerance at two per cent—but in hundreds of cases we got one per cent. In many 'zero' shrinkage was achieved. Sanforset will be established by Cluett, Peabody & Co. as the standard of shrinkage in viscose rayons—the first standard of permanent stabilization for viscose rayons."

Study Abrasion In Testing Of Textiles

Resistance to abrasion is an important factor in the serviceability of many organic and inorganic products, such as textiles, rubber, plastics, leather, linoleum, ceramics, mastic tiles, concrete, stone, wood and metal. The National Bureau of Standards is at present engaged in research on the measurement of resistance to abrasion as a part of the broad program on abrasion conducted by the Office of the Quartermaster General. One of the major problems in this work has been the design and development of an abrasion machine that will abrade a plane area of a specimen uniformly over the entire surface and from every direction in its plane. A complete mathematical solution to this problem has been worked out by Herbert F. Schiefer, and a machine based upon the solution has been constructed at the bureau.

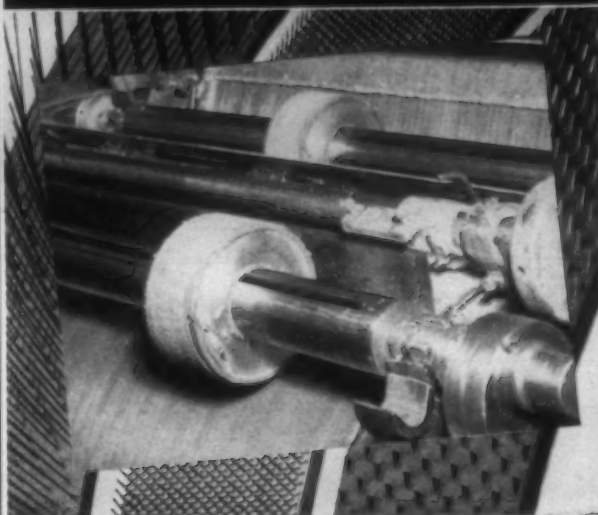
In an attempt to approximate the conditions that produce uniform abrasion, numerous abrasion machines have been developed, several with highly complicated mechanisms. However, in most cases the relative motion between the specimen and abradant is not the same for the whole area of the specimen to be abraded, and in no case is it the same from every direction in the plane of the abraded surface.

In the mathematical solution that was obtained, the abrasion at any instant is constant in magnitude and direction over the whole abraded area. From instant to instant the amount of abrasion remains constant, but the direction changes continuously through 360° in each cycle. This general solution requires that plane areas of the abradant and of the specimen, which are in contact under pressure, rotate in the same direction and with the same angular velocity. The specimen must at all times be completely in contact with the abradant, and the specimen and abradant must not be coaxial. The specimen may revolve about the center of the abradant with any angular velocity in the same direction as its rotation or in the opposite direction. The simplest solution from mechanical considerations is the special solution in which both abradant and specimen rotate in the same direction and with the same angular velocity while the specimen does not revolve. A machine based upon this special solution has been constructed and found to operate satisfactorily for a wide variety of textile products.

A new feature of this machine is the abradant. It consists of a disk 4½ inches in diameter, in one face of which are inserted a series of parallel strips of clock spring, 0.025-inch thick and spaced ⅛-inch apart. The edges of these springs, ground and lapped to a plane surface, constitute the abradant for textile materials. Although tests indicate that the abrasive effect of this device remains constant, the abradant is, obviously, not uniform over its entire area. Any effect on the result of a test due to non-uniformity in the abradant is eliminated by rotating the abradant once more than the specimen in every 240 rotations.

Abrasion machines based upon the mathematical solution which has been derived have many advantages. The resistance to abrasion of many products, such as textiles, varies greatly with the direction of the abrasion because of struc-

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tural differences due to the type of weave and the kinds of yarns and fibers used in the warp and in the filling. Since such machines can abrade plane areas of a specimen equally from every direction, the effect of fabric construction or form factor on the resistance to abrasion can be evaluated directly. Systematic studies of the effects of weave design and yarn construction on the resistance to abrasion should eventually lead to the development of balanced fabrics, that is, fabrics which are equally resistant from every direction and therefore more durable.

It will also be possible for the first time to abrade a number of specimens simultaneously in such a way that each specimen receives exactly the same amount and kind of abrasion, since the same area of the abradant acts in the same way on each specimen in each cycle or rotation. This will permit the investigator to test several experimental specimens simultaneously with a standard specimen and obtain a true comparative value at any time during the tests, even though the abradant is not uniform and does not remain constant during the test. Machines based upon the mathematical solution may thus have many applications in research and industry for a wide variety of materials.

Memphis Prepares For Gala Cotton Carnival

The thousands of visitors expected for the annual Memphis (Tenn.) Cotton Carnival will be treated to a holiday of gaiety and fun and a pagentry of splendor never before approached in that part of the country, according to officials of the event who have set this year's celebration for May 12-17. To open the big week of frolic and frivolity, the imperial barge bearing their majesties, the King and Queen of Cotton, will arrive at 9 p. m., Tuesday, May 13, accompanied by their court of 11 princesses, along with 45 ladies-in-waiting and their escorts. As huge searchlights sweep the heavens, with bombs and skyrockets bursting in the air, boat whistles and sirens blowing, they will float majestically down the Mississippi escorted by countless river boats which stand aside as the imperial barge pulls up to the dock to be greeted by the blare of massed bands. There they will be welcomed by the mayor of Memphis who will present the cotton royalty with the white golden key to the city. Following the arrival of the royal party, visitors will witness the first of four spectacular parades, the cotton parade with gorgeously lighted floats.

The second parade, next day, is the royal courts parade, a daytime event. It is at this time that beauteous Hilma Seay, Maid of Cotton, is paid tribute. As King Cotton's ambassador, she will have just returned from her official trip to Paris and the fashion capitols of Europe. On this day, also, will be held the Cotton Fashion Show, centered around the Maid of Cotton, who will model her highly fashionable wardrobe, assisted by two alternate maids in a demonstration of just how fetching cotton fabrics can be. The Maid of Cotton Ball will crown the day's festivities.

The Children's Day, with junior reigning supreme, will be Friday, May 16, and the children's parade is one of the highlights of the week. More than 5,000 children will participate in the activities of the day, climaxed that evening by the coronation of their own King and Queen at the Children's Ball.

The grand parade, Saturday night, will bring the carnival to a sensational finish. For this parade expert designers have been working on floats many months in advance. They

will be the most dazzling of the week, with myriads of electrical ornaments, and imaginative effects of the greatest magnificence.

A. S. T. M. Textile Section Holds Meeting

Application of the electric strain gauge in connection with instruments for measuring the strength and elongation of textile fibers and yarns, a comparatively recent development, was the subject of a symposium at the three-day meeting of Committee D-13 on textiles of the American Society for Testing Materials held in New York City March 12-14. Dr. J. W. Ballou of the rayon department, technical division, E. I. du Pont de Nemours & Co., Buffalo, N. Y., discussed the magnetic type of strain gauge and its textile applications. Prof. W. N. Murray, head of the stress analysis laboratory, engineering department, Massachusetts Institute of Technology, discussed the wire resistant type of strain gauge and Dr. Herbert F. Schiefer, chief physicist, textile division of the National Bureau of Standards, discussed indirect methods applicable to the use of both the magnetic and resistance strain gauges to textile testing.

Suggestions for test methods to evaluate bed blankets from the standpoint of the ultimate consumer were made by H. D. Evans of Pepperell Mfg. Co. who said he believed the primary concern of an A. S. T. M. study on blankets should be on warmth values. Speaking at a session concerning household and garment fabrics, Mr. Evans reported his company has done much research on 100 per cent wools through 100 per cent cottons to determine warmth properties of fibers.

J. K. Phillips of Goodyear Research Laboratories told the machines section that new outlets might open for cotton breeders if more scientific study of fiber characteristics and changed tensile test methods were used. During a full day session on abrasion, Stanley Becker of the U. S. Army Quartermaster research laboratory stated that the Army wishes to improve its testing, pointing out that wartime testing was often hasty. Frank O'Neil of Pacific Mills explained the functions of the Taber abrasion machine and S. Tanenhaus of the Army Quartermaster Depot, Philadelphia, reported that the Wyzenbeck machine had produced "consistent, reproducible results" during inter-laboratory tests. Others who spoke were Walter Hamburger of Fabric Research Laboratories, Inc., Dr. L. Fourn and John Merscher.

Approval by letter ballot of new standards on cotton yarns was made known by W. R. Marsden of Bibb Mfg. Co., chairman of the cotton yarn section, who also declared that requests for standards for plied yarn had been made but no action was taken by the committee.

At the session on cotton, under the chairmanship of Malcolm E. Campbell, dean of the North Carolina State College school of textiles, methods of testing now in use but not recognized by the A. S. T. M. were discussed. Dean Campbell said that a special sub-committee had been formed to draw up these substitute tests so that they could be submitted, via letter ballot, to the membership as a whole. Should 80 per cent of the members approve the substitute methods, he added, they would be adopted by the group. Dr. K. L. Hertel of the University of Tennessee, inventor of the Fulrograph, an optical instrument for measuring fiber length, discussed the latest developments of the testing machine and the advisability of adopting it as a standard.



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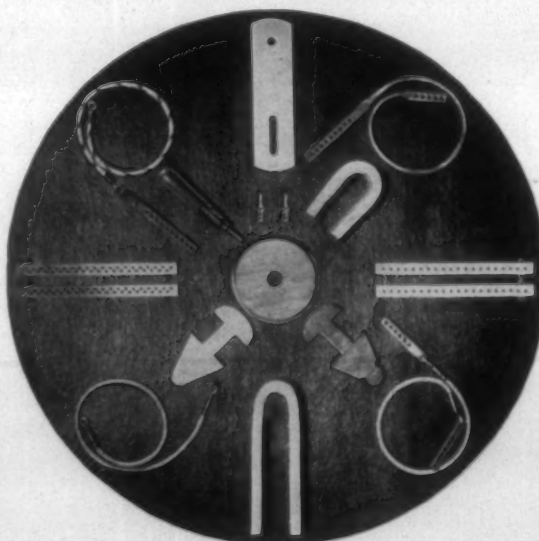
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Cotton Goods Market

Selling agencies in New York City's Worth Street market seem unconcerned by the current lack of activity. Mills are sold strong for the first half, it is reminded, and there is little to worry about. Once customers have digested production already contracted for, they are expected to return for more.

A number of large cotton goods consumers have been operating on inventories for a considerable period, one merchant states, and despite price conditions they sooner or later must come back in to buy in order to keep operating.

Although it is conceded generally that there will be some weakening in prices for late delivery, mill men figure that it will be gradual and small. Indications are that, if prices fall to any great extent, one house now handling a good part of the market's gray goods will turn to production of finished goods and thus create an even tighter gray situation.

Several commission houses, upon finding it hard to move goods, have withdrawn from the market with the observation that there is no need to worry. Mills are sold strong, they say, and if the mills will mark time for 60 days, a lot of big buyers will be coming back for fabrics.

A lot of large consumers have been operating on their inventories for a considerable time now, selling house executives point out, and with retail sales high, they will be coming back into Worth Street before long if they want to keep going. It happened before with bag manufacturers declaring they would not buy at current prices, these sources remind, but after a time they returned to buy large yardages at prices higher than they could have had the goods originally.

If the mills will just hold their ground on prices, it is said, buyers will be back and glad to pay the prices. The market was heading for a gradual adjustment on the basis of supply and demand, it is reminded, when the Jack Straus and White House statements on prices frightened buyers out of the market. As soon as their confidence returns, they will be back, it is said.

Mills are sold a long way ahead, with a goodly portion of third quarter already contracted for, Worth Street circles say. In normal times, it is reminded, mills sell three and six months and not more. Even where selling houses are releasing print cloths for year-end shipment, it is reported, sales executives have been reluctant to do so.

One of the past factors in maintaining present high price levels has been the gambling of some on future goods. It is pointed out that the incentive for such speculation is now gone and that most goods purchased from here on in will be for legitimate purposes rather than speculative ones.

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Cotton Yarns Market

Demand for cotton knitting yarns, including calls for spot and nearby delivery, has fallen off during the past fortnight, several distributors in Philadelphia say. This applies, they add, to medium and some fine counts, which a month ago received heavy attention from cotton yarn users.

Market suppliers also reported that offers from combed yarn sources have mounted over the last ten or 15 days, with letters accumulating that bear offers of wanted single and ply combed counts. Many such new offerings guarantee specific weights of combed yarn on a regular weekly basis, distributors say. While all counts are offered, the aggregate weight of each particular number is not large, market sources explain.

Business is still described as slow by most Philadelphia sellers, many of whom point out that a lull is natural at this time. It is granted that in the case of some trades; however, the quiet has been more pronounced than had been expected.

Acknowledging a lull in both buying and inquiry in sections of the market, distributors point out that queries placed with customers reveal it is not so much a question of price as a lack of need of additional yarn. Pointing out that customers in such industries as the carpet, insulation, tapestry, etc., have been buying conservatively compared with several quarters back, yarn sellers say buyers disclose they would buy at present regular contract quotations, if they had a real need for yarn.

Reports from numerous accounts in the slow buying trade, however, are to the effect that yarn requirements have been reduced in ratio with manufacturing needs. As yet there is no deep concern over this condition, as some believe it is temporary and may be corrected in another few months.

This current lag is also attributed to the sold-up position of numerous mills. Many distributor and spinner representatives now report they have closed the books with full second quarter business accomplished. Such sellers will now do little except make deliveries until third quarter business is offered. To date, little attention has been given contracting beyond June, by either buyer or seller.

It is to be expected that many customers who now are covered through May or June will by the end of next month be covered only about one-half as far into their next quarter requirements, according to distributors.

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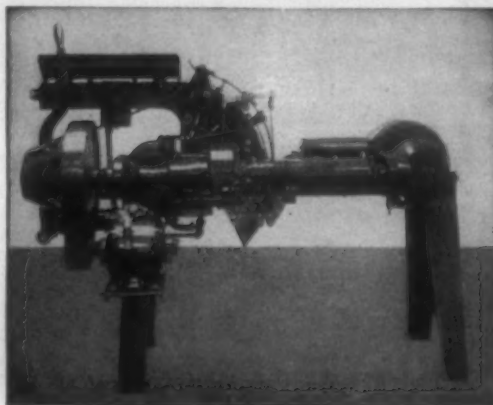


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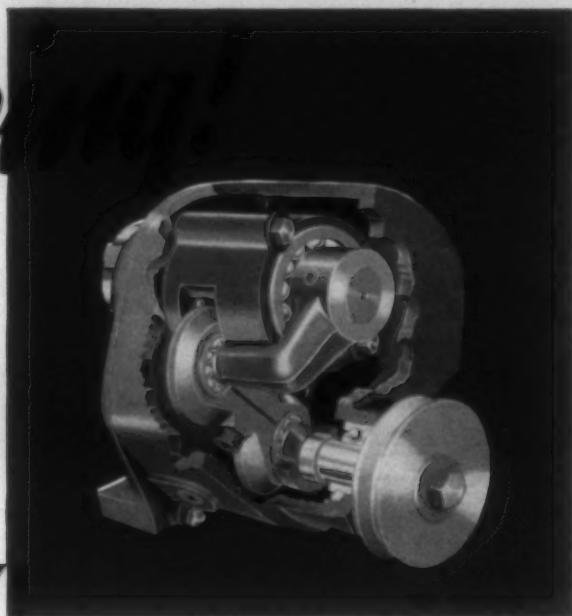


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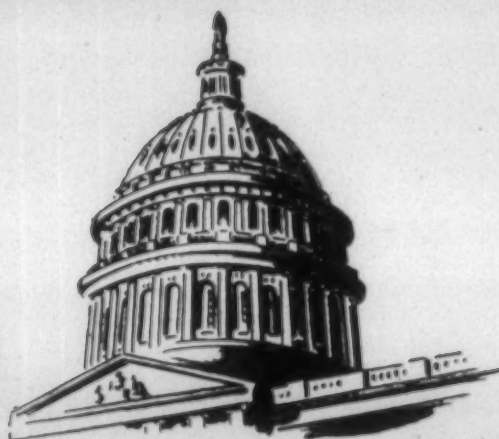
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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]



Sweeping revision of labor laws and national labor policy is being taken up on the floors of the House and Senate after three months of committee work on labor bills. The House bill conforms to expectations; it is drastic, sharp-edged, and puts employers and employees on an equal basis in wage relations, and erects the first definite safeguards for the public interest in the face of strikes, labor disorders, work stoppages and union aggression and abuses. It establishes rights of minorities, fixes union responsibility, makes unions subject to anti-trust laws and injunctions in certain cases, and bans the closed shop.

The House bill will pass first, virtually intact as reported by the labor committee. The majority vote for it will be overwhelming. Passage of the Senate bill will take more time, and floor amendments are in prospect. Both bills will emerge with sufficient majorities to over-ride a Presidential veto.

House and Senate conference on the bills promises to be long-drawn-out. House conferees will probably stand up sternly for their bill, with chances strongly favoring final acceptance of the House bill in slightly modified form. A Presidential veto of the final measure is expected by members of both branches.

Union leaders are rising to their utmost in resistance of both bills. The C. I. O. is threatening reprisals and trying to employ intimidation. Letters from tens of thousands of rank-and-file union members to senators and House members urge enactment of sharply restrictive legislation establishing rights of individuals in unions, guaranteeing democratic conduct of unions, and laying bans of strikes. Many rank-and-filers want a limitation on tenure in office of union officials.

Both bills are substantially a result of the sum total of testimony of labor leaders before House and Senate committees, and revealing a startling condition in the house of labor. As a result, additional labor legislation may come later in this session. Committee testimony has revealed that unions generally are in the hands of professional

agitators and self seekers with little, if any, interest in advancing the condition of workers. Rather, they appear to have entrenched themselves in the labor movement to advance their own personal political fortunes, tinkering and dabbling in politics more than in industrial relations, and converting their unions into straight political organizations.

Much of the testimony has revealed both local and national union leaders as supple and calculating politicians, some of whom use practices, as at Allis-Chalmers, that verge on revolt to overthrow the government. Their weapons against their own members are coercion and intimidation.

The House bill strikes a death knell at communism, and outlaws the Communist Party. Members of unions may be expelled for either Communist Party membership or communist activity. Communists are attempting to organize a nationwide drive to defeat the legislation.

The House bill defines a new sweeping three-way national labor policy; i. e., to protect rights of employers, employees and the public. It prescribes "orderly and peaceful procedures for preventing the interference by either with the legitimate rights of the other," and defines and proscribes "practices on the part of labor and management which affect commerce and are inimical to the general welfare."

Under the House bill the N. L. R. B. would be abolished. A new labor-management relations board of three members would be established, exercising only judicial functions in labor disputes. Administration of a revised and revamped Wagner Act would be reposed in an "Office of Administrator," as a new, independent agency. The administrator would be a party to all proceedings before the board, and prosecute unfair labor practices.

Signing of any closed shop wage contract in which an employer agrees to hire only union members is flatly prohibited. A union shop contract may be effective only after a majority of an

employer's employees, voting by secret ballot, have indicated their desire for it.

Closed shop contracts now in effect would be ineffective after six months under the House measure. Should a union attempt by strike to force an employer to sign a closed shop contract, the board would issue a cease and desist order, enforceable by court injunction and revoking the union's rights under the Wagner Act for one year.

The House bill outlaws industry-wide bargaining, prohibiting certification of one union as representative of employees of "competing employers," except to exempt small concerns with less than 100 workers each within a radius of 50 miles from each other. This provision would restrict union contracts to a company-wide basis. Such unions could join national unions so long as the latter do not "interfere directly or indirectly" with collective bargaining and strike activities.

Communists would be given "the gate with a kick" under the House bill. The board would be prohibited from certifying any union as a collective bargaining agent if its national officials belong to the Communist Party, or because of support of communist policies, "can reasonably be regarded" as belonging to the Communist Party.

Injunction against any strike in transportation, public utilities or communications could be sought by the President through the Attorney General if threatening public health, safety or interest. Such injunctions would be in effect for a maximum of 75 days, as cooling off period, during which settlement would be attempted by other government agencies.

Prohibition would be laid against any strike before collective bargaining processes of the measure are exhausted. The old labor practice of opening wage conferences with insults and strike threats would be banned by law. At least five conferences within 30 days would be mandatory, at the end of which employees would be informed by both employer and union of the position of each, and would then secretly vote on the last offer made by management. A strike would be illegal unless this offer is rejected by majority vote.

Employers would be prohibited from (1) interfering with the formation or internal affairs of a union; (2) involuntarily checking-off union dues; (3) signing a closed shop contract, or (4) refusing to bargain with certified agents of his employees.

Strict penalties are laid on unions under the House bill. An employee or union agent would be prohibited from coercing any one to join a union; from refusing to bargain collectively with an employer, or striking for a closed shop contract. Employees would have the right to self organization, but initiation fee could not exceed \$25, and no worker could be required to involuntarily join or participate in any insurance or benefit plan.

The Senate composite labor bill is less drastic in its provisions than the House bill, but drastically curtails privileges of unions, and contains many identical features of the House bill. Both bills rewrite labor policy, outlaw the closed shop; authorize 75-day Federal injunctions against strikes; outlaw jurisdictional strikes and boycotts; ban foremen from collective bargaining, and fix union responsibility.



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